International Journal of American Linguistics

VOLUME XII NUMBER 4

OUTLINE OF CUNA GRAMMAR

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0. Introduction
1. Phonology
2. Syncope
3. Reduplication
4. Nouns
5. Adjectives
6. Numerals
7. Pronouns
8. Verbs
9. Auxiliary verbs
10. Substantive verb
11. Adverbs
12. Postpositions
13. Conjunctions
14. Interjections

0. The following outline of Cuna grammar is meant to give the outstanding features of this language, which is spoken on the San Blas coast, Panama, according to notes and records taken by and under the auspices of the late Baron E. Nordenskiöld (1927–32). The Cuna language has previously been described by J. Dyneley Prince, in articles in the American Anthropologist (vols. 14, 15). For details of new materials, I must refer the reader to a work that will be printed for the Ethnographical Museum, Gothenburg, Sweden, under the title: A Critical and Comparative Grammar of the Cuna Language.

The Cuna language[1] has been classified with the so-called Chibcha languages. If we mean by this that it is derived from the same direct source as the Chibcha (or Muysca) of Colombia, we may become guilty of a misstatement. All we can say is that Cuna contains a large number of Chibcha word stems, among which figure many primitive nouns and verbs. Even though the case may not be quite comparable to that of Kechua and Aymara, there is much to be said in favor of the view that the Chibcha analogies in Cuna depend on a relatively late wave of influence from the south.

1. Phonology.

1.1. The sounds of the Cuna language are the following: (vowels) a, e, i, o, u, all of which have in the main their Spanish values;[2] (consonants) ch, k, kw, l, m, n, p, r, s, t, among which we may include the semivowels w and y. There are two main categories of consonants: plain consonant sounds, with the approximate value of the corresponding sounds in Spanish (cf. below),[3] and gemi-

[1] The origin of the word Cuna is not ascertainable. The designation kuna or kuna-kuna is being replaced by tule *man*. It seems, however, to enter into the name of the Cuna mythical hero Ipeorkun (commonly written Ibeorgun), "The Shining Gold Cuna" (?). Kuna as a common appellative means *long* or *length* (either of time or place).

[2] The following phonetic details are quite audible in the phonographic records: long a is clear as in French *part*, e and o often very open (the latter approaching English a in *fall*), long u shows no tendency to become narrow (cf. below). The short a (for instance in ampa *still*, tarpa *between*) approaches the English short u, the short i (kinki *bow*) is occasionally like French e in *le*, the short u (in purpa *soul*) is often like the same neutral sound pronounced with rounded lips (cf. note 3).

[3] We may add that Cuna s and ch are pronounced with the tongue pressed at the same time against the front teeth and the alveolar ridge, the only difference being that the former is a plain spirant, the latter an affricate. Cuna r is in most positions strongly trilled (in the word purpa *soul*, it is almost vocalic: prba; hence purwa *wind* may occasionally become prwa, prua). Initial vowels are pronounced without glottal occlusion; a weak aspirate may be heard.

nated sounds, consisting of an implosive and explosive element and (as in the case of stop consonants) having a longer duration: the geminates are only found in intervocalic position. All stops are unaspirated and semivoiced, and the latter statement is true of the s-sound also; sonority is liable to arise especially between vowels (in the plain consonant series), and the soft Spanish pronunciation of intervocalic b, d, g is also possible as a phonetic variant. The other consonants (except ch) are fully voiced.

1.2. The geminated stops (and medial ch, which is of the geminate type) are always voiceless: apart from medial ch, they are kk, kkw, pp, tt. The other geminates, which are ll, mm, nn, and r(r), and in which there is no implosive nor explosive element, are all voiced. The plain consonants and the geminates correspond to each other as follows: k, kk; kw, kkw; l, ll (r); m, mm; n, nn; p, pp; s, ch; t, tt. There hardly exists a non-geminated ch (an exception is chichitti *black*, usually sichitti), and the same is true of r, which does not have to be written double between vowels. In borrowings from Spanish and English consonants are as a rule rendered by Cuna equivalents of the plain series (notice especially sisa *chicha* and sikali, from *cigarrillo*).

1.3. In syllable-final position there are no geminates. These are changed into implosives, by loss of the explosive element, or otherwise reduced in sound.[4] The plain consonants are either turned into the corresponding implosives or left (practically) unmodified: plain or geminated ch appears as s in syllable-final; k, kk appear as k (implosive); kw, kkw appear as k (implosive); l, ll appear as l (r); m, mm as m; n, nn, as n; p, pp as p (implosive); r as r; s as s; t, tt as t (implosive). The syllable-final sounds (except l, m, n, r) are all voiceless. For l we often find r, which is more or less trilled, like the geminated (intervocalic) sound. The implosives are sounded approximately as in Spanish (respecto, apto); implosive k is usually changed into the vowel i in common speech (cf. Spanish deleitable, from delectabilis). The semivowels (w, y) neither occur geminated nor as syllable finals.

1.4. Initially we find the following plain consonants only: k, kw, m, n, p, s, and t, which are either voiceless or semivoiced. Initial ch is rare (cf. above), and the same is true of initial l, which has practically always been changed into n (hence these sounds often interchange); initial r is non-existent (Spanish Rubén is pronounced Uruben in Cuna). Of consonant clusters there are rare examples of kr and pr, which depend on a special form of vowel syncope (cf. footnote 3).

1.5. Vowel quantity is dependent on the nature of the following consonant, so that vowels are slightly shorter before syllable-ending consonants and geminates than in other positions (cf. footnote 2). Cuna also has geminated vowels, properly counting as two syllables, but sometimes reduced to single superlong vowels (muu *grandmother*): most of the originally monosyllabic nouns get the expanded vowel. Conversely, all word-final unstressed vowels tend to become superbreve and obscure; these are the vowels which are ultimately syncopated (see **2.1.**). Sound reduction may take place in compounds as well, in which the components are independent stress units (ani-puna *my sister*, where i and the last a are both superbreve and liable to become syncopated). Diphthongs are phonologically not distinguishable from dissyllabic vowel complexes.

1.6. Syllable stress is regulated by the duration of vowels and consonants. It is even on all syllables, except those containing superbreve vowels. The latter occur (as we have already seen) in the last syllable of every stress unit of more than one syllable. There is also a tendency to shorten two contiguous vowels at the end of a unit of more than two syllables, in which case a geminated vowel may be contracted to a single long

[4] That is, -k, -p, -t are articulated, but the explosive element is delayed, or not forthcoming, whereby these sounds become almost inaudible.

vowel. The last vowel is thus short and unstressed in takke *see*, kwilet *dancing*; the last two vowels, in takkoe *will see*, mos-kua *when he arrived*; for me(e)rpaa *many* we may also find me(e)rpā (with no particular stress on the last syllable).

1.7. Of special interest is the emphatic (or expressive) prolongation of consonants, as of r in purrikwat *very small*, or pp, in pippikwat, *idem*. The prolonged sounds have no phonological function in the ordinary sense. Phonetically they may equal the emphatics of certain Pacific coast languages, but they are not glottalized (as in Ḉoos or Kwakiutl). The principle of using an emphatic sound (also called *fortis*) to express diminution has been studied by Edward Sapir in the Wishram dialect of Chinook.[5] In Cuna we find a similar tendency, for instance in tottokwa (emphatic form of totokwa) *small, very small*, but such forms are not limited to the diminutive sense only.

2. Syncope.

2.1. Vowel syncope plays an important part in Cuna grammar. It consists in the total suppression of a superbreve vowel (see **1.5.**). It is hard to say whether it is a phonetical or grammatical process. Non-syncopated forms are often used in songs, where the spoken language would never use them. On the other hand, syncope is more or less the rule in certain grammatical forms, and we may also find that certain other forms are never, or quite exceptionally, syncopated. As a general rule we find that words of originally more than two syllables syncopate the last vowel (temar = temala *sea*), and that in compounds dissyllabic components syncopate their last vowel (Nus-tup, from nusa *rat* and tuppu *island*). Notice also e-pun *his sister* (from puna *sister*), antakke *I see* (from ani-, an-, possessive prefix), in which both principles are applied.[6] Expanded vowels (see **1.5**) reappear in their original form in the same cases (muu *grandmother*, interchanging with mu). Some suffixes are never (or seldom) syncopated, others usually appear in their syncopated form (**4.2**).

3. Reduplication may affect the whole word or its first syllable. There are three main types to be distinguished.

Reduplication of the whole word: kila-kila *scratching and scratching, scratching repeatedly*, kwa-kwa (two stress units) *nuts* (*here and there*).

Reduplication of the first syllable, without any other modification: ma-mai *they are* (*here and there*), na-nai *they go about* (*in different places*), na-nae *they go*, pi-pioke *beat* (*and beat*).

Reduplication of the first syllable, with gemination of the following consonant: memmermakke *flutter* mu-mmut *drunk, drunkard*. The latter type is interesting as it is probably historically identical with the current form of reduplication in Nahuatl and Pipil (Nahuatl pì-pi *pick here and there*, cuìcuīlia *take a thing here and there*, Pipil kux-kuyamet *hogs* (*here and there*)); the Nahuatl *saltillo* (marked by the grave accent), the Pipil x, and the Cuna gemination all indicate the loss of an implosive consonant.

Reduplication in Cuna expresses *stray occurrence*, either in time or place.

4. Nouns.

4.1. The Cuna noun neither distinguishes between different genders, nor between animate and inanimate categories. Person is not expressed so precisely as for instance in Algonquian, but there seem to be traces of a similar distinction in the use of the possessive prefixes (**4.8**). In the numerals there are often class marks (**6.2**). Person may sometimes be indicated by the use of auxiliaries (**9.3**).

4.2. There are plain nouns, such as tule *man*, ome *woman*, neka *house*, which may again form endless compounds, and nouns

[5] See Handbook of American Indian Languages, Part 1, pp. 639 sqq.

[6] Cf. Nahuatl nemi *he lives* and ō-nen *he lived*, where the loss of the final vowel may originally be due to the addition of a syllable.

derived by means of nominal suffixes. Of the latter the most common are -kwa, -yo, -pa, -la.

-kwa has actually such a wide range of meanings that we may consider it as a general formative of concrete nouns. Originally it was (as in the related languages of the Talamanca group) restricted to nouns of a certain class of small objects, which often are found to have related or identical names in the different languages of the Indians, such as *stone, egg, nut, bud, flower, star* (cf. Nahuatl tetl *stone, egg*, Dakota itká, wítka *egg, flower, seed, testicle*, and related words in the Siouan languages). In this function it is still found in the Cuna words ak-kwa *stone*, tala-kwa *eye*, niis-kwa, iis-kwa *star*, etc. But it is used in personal designations as well (ope-kwa *bather*) where perhaps it originally expressed diminution or depreciation (-kala *bone*, in such derivations as wie-kala *lazy*, tope-kala *timid*, originally used as nouns).

-yo is especially common with the totality form of the noun (**4.6**). From its being employed in this construction it may be concluded that it expresses the idea of *oneness*, being also the grammatical expression of a distinctive class *or* type (much like English -hood or -head). It is of interest to notice an analogous function in the Nahuatl suffix -yō-tl.

-pa(-p) is no doubt originally a collective suffix, as it serves to form the plural in some of the related languages (cf. also the tribe names Terra-ba, Kaga-ba). In Cuna this suffix is common in names of plants and animals: make-p(a) *jagua* (which yields a red dyestuff: cf. maka- *paint*), sulu-p(a) *eagle*, but also in other words, such as ukku-p(a) *sand*; cf. -(r)pa(a) *many, much* (**4.7**).

-la (-r) is evidently related to the passive formative (-le-, see **8.15**).[7] Where the meaning of Cuna -la is clear, it expresses the result of a verbal action, as in ima-la *thing*, from ima- *make, do*.[8]

4.3. The Cuna noun has no special case forms. Thus the word tule *man, Cuna Indian*, may be used as nominative (tule e-taisa *the Indian saw him*), as accusative (an-tule-taisa *I saw an Indian*), as possessive case (tule talakwa *a man's eye*: we find in the same sense tule e-talakwa *man, his eye*; cf. under the possessive prefixes **4.8**). The local cases (including the dative) are formed by means of postpositions: tule se, tule ka *to the Indian* (the former more local, the latter more closely corresponding to the dative case). The vocative has no special characteristic: tule (*O*) *Indian*.

There are three special forms to express number (apart from the common nominative singular form): two plural forms (in -kana and -mala, respectively) and a totality form (in -pi, -pii).

4.4. Plural in -kana. By this suffix an individual plural is expressed, that is, *various of different kinds*: tule-kana *various* or *different people*, sipu-kana *white stones* or *pebbles*, niis-kana *stars*; even in cases where the sense appears to be collective we must assume that -kana denotes rather a loose conglomeration than a natural group or class. It is remarkable that this suffix shows phonetical affinities with the Carib suffix -con as well as the Kechua suffix -cuna, used in an identical sense (Kechua yana-cuna *servants* = Cuna mai-kana).[9]

4.5. Plural in -mala. This plural suffix expresses *natural relationship* or *fellowship* of various kinds, as well as *functional unity*: kilu-mala *uncles*, amma-mala *aunts*, ua-mala *fish* (lit., *the fish nation*), ipya-mala *the eyes* (as a functional unit). It is probably originally a word denoting *kindred*, as seen in the

[7] Cf. the relation between the Nahuatl passive in -lo and the noun suffix -l-: in tlà-tō-l-li *a word* (*what is said*).

[8] Cf. Nahuatl tla-chīhua-l-li *creation, work*, from chīhua *make, do*.

[9] The Cuna vowel a in many cases probably represents an original reduced vowel (cf. Cuna apakana *body* = Chibcha ybaquyn, where y is described as a vowel between e and i); in Kechua the same vowel probably appears as u.

personal pronouns (an-mala *my kindred*), i.e., *we*, pe-mala *your kindred*, i.e., *you*, etc.). Otherwise it is not found as an independent word.

4.6. The totality form expresses the sense of *nothing more and nothing less* with the suffix -pi or -pii: san-pi(i) *all meat* or *only meat*, ka-pi(i) *all herbs* or *herbs only*. It is particularly frequent in combination with the noun formative -yo (**4.2**), with which it forms the very productive suffix -yopi. This compound suffix renders the idea of *like*: olo-yopi *like gold*, mani-yopi *like silver*, which constructions might be literally rendered by *all one gold* (i.e., *the same as gold*), etc. We also find such constructions as pe-yopi *like you*, in which -yo is more of an independent noun (cf. Nahuatl yô, iyô *alone*).

4.7. The suffix -(r)pa(a) *many, much*. This variant of the noun suffix -pa (**4.2**) is not a real plural suffix. Added to nouns it usually expresses *many*, otherwise *much* or *very*: pukki-pa(a) *many*, uee-pa(a) *very hot, it is very hot*, nue-rpa(a) (*it is*) *very good*. In this form -r- is the nominal suffix -la (**4.2**).

4.8. Possessive pronouns prefixed in Cuna: an(i)- *my*; pe *your*; e-, a-, na- (for the distinction, see below) *his, her, its*. Thus, for the word papa *father*: an(i)-pap *my father*, pe-pap *your father*, e-pap (a-pap, na-pap) *his, her father*. There are no plural forms in common use, whence *our*, *your* (pl.), and *their* must be expressed by personal pronouns, according to the construction mentioned in **4.3**: anmal pap *our father*, pemal pap *your father*.

In the third person we find three different forms, of which the last (na-) appears to be reflexive (na-pap *his own father*). Of the others, a- appears chiefly at the beginning of a sentence, while e- is preferently used after a preceding noun in the possessive construction (cf. the examples in **4.3**). On the other hand, a- seems to refer to the main third person, while e- (except in the above-mentioned construction) rather refers to the fourth person (to use Algonquian terminology), thus corresponding to *the other's*. But the problem requires further investigation. It should be added that na-, in the reflexive sense, may be used of the first and second persons as well.

5. Adjectives. Originally no distinction existed between nouns and adjectives. Thus nele (lele)[10] *sacred* is used both in the sense of *one who has supernatural power* (especially of *vision*) and in the adjective sense of *wise, sacred*. All adjectives, unless derived from verbs, are probably nouns in their origin: sipukwat *white* (originally (*white*) *pebble*). The attributive adjective follows the noun (akkwa-lele *sacred stone*); for the attributive suffix -ti, see **8.13**. The predicative adjective is equal to the attributive adjective; copula is not expressed: nueti *it is good*, uee(r)paa *it is very hot*.

Comparison is expressed by various circumlocutions, as in Nahuatl: *more* is rendered by the adverb pule, pur: pur nueti *better*.

6. Numerals.

6.1. The cardinal numbers from 1 to 10 (in their plainest form) are as follows: kwena *one*, po(o) *two*, pa(a) *three*, pakke *four*, attale *five*, nerkwa (< *lel-kwa) *six*, kukle *seven*, paapakka *eight*, pakkepakka *nine*, ampeki *ten*. These forms are often used with the suffix -kwa (**4.2**): ila poo-kwa *two times, twice*, tule pakkekwa *four Indians*. Exceptions are attale, nerkwa (in which -kwa has become part of the stem), and kukle.

The ordinals (except *the first*, which is expressed by special words, (kepe, kepet; cp. 11) have the same form as the cardinal numbers: ila paa *the third time*, pilli pakke *the fourth stratum* (of the earth). The suffix -kwa may be added, as in the cardinal numbers, and finally also the attributive suffix -ti (see **8.13**): attale-t(i) *the fifth*, kukle-t(i) *the seventh*.

6.2. The numeral classifiers are placed

[10] In Cuna initial *l- becomes n-; hence we often find alternation between these sounds, as in nele: akkwa-lele (*sacred stone*).

between the noun and the numeral (whether of the cardinal or ordinal description). The classifiers are in great number, the most common one being kwa, evidently of the same origin as the nominal suffix (**4.2**) and doubtless originally used of the same class of nouns. Others are war (wala *trunk, branch*) used of *persons*; sar, used of *trees*; tar, of *spaces*; kuna (*length*), of for instance *days* or *time*. As the numerals usually follow the nouns in Cuna, we get the following constructions: tule war-kwena *one man*, ome war-pockwa *two women*, ipekala kun-pakke *four days* (or *four times*), neka tar-pookwat *the second house* (*place*). Sometimes no noun is used, as in kwa-po *two nuts* (kwa-kwa *nut, nuts*); cf. **3**, first type.

7. Pronouns.

7.1. The personal pronouns in Cuna are made up from a nucleus -ti (-tti) and the possessive prefixes, mentioned in **4.8**; the forms thus obtained are used in the singular only: ani-tti (an-ti) *I*, pe-ti *you* (in the third person, the forms are the same as those of the demonstrative pronouns: see **7.2**). To make plural forms, the formative -mala (see **4.5**) is used, likewise with possessive prefixes: an-mal(a) *we*, pe-mal(a) *you*, a-mal(a) or e-mal(a) *they* (the latter often means *the others*). Syntactically the personal pronouns are construed as nouns; by using them instead of a personal prefix (see **8.5**), emphasis is given to a pronominal subject or object: anti soke *I say* (pronoun stressed) or *it is I who say*, as against an(i)-soke *I say* (verb stressed). The plural forms are used to supply the missing possessive prefixes (see **4.8**).

7.2. The formation of demonstrative pronouns includes demonstrative elements, of which the most common are: i- *this*, a- *that*, te- *this*, (*the same*), we- *that* (more distant); to these are adjoined the elements -ti or -tti (known from the personal pronouns), whence we got: itti *this*, ati *that*, weti *that* (*yonder*). These are used as substantives or adjectives: in the latter sense they precede the noun, e.g., itti tule *this man*, ati ome *that woman*. The demonstrative a- may directly precede the noun, as in a- tule *that man*, in which case it is formally, at least, the same as the possessive prefix (see **4.8**). Ati may also be considered as a personal pronoun *he, she, it* (or *it is he, she*).

7.3. The following interrogative pronouns are most common: toa *who?* ipi *what?* pitti *which?* We may here also mention the general interrogatives iki *how?* inkua *when?* (of past time), sana *when?* (of future time), pia *where?* pikwa *how many?* which are partly used as adverbs. All (or most) of these forms may be used in a triple sense: in direct interrogation; in indirect interrogation; in an indefinite sense. Ipi thus means either *what* or *something* (it may also be used as a noun, in the sense of *a thing*). In the above pronouns and adverbs we may discern the following interrogative elements: i- (cf. Kechua i-ma *what?* Nahuatl ī-c *where? when?*), pi- (cf. Chibcha fi-cua *how many?*), and sa- (the latter perhaps from original **ća-*).

7.4. Among indefinite pronouns we may include pela *all*, kwena *some, any* (also plural), paitti *other*, which are used as nouns or adjectives (in the latter case placed either before or after the governed word). The following may be termed pronominal adjectives (they are also used as nouns): toka *much*, me(e)rpa(a) *many*, ichakkwakwa (*a*) *few*, pukkipa *many, enough*.

8. Verbs.

8.1. Like the nouns, the verbs are either simple or compound, primitive or derived. The simple verbs have all become dissyllabic (**5**),[11] their stem ending either in -a or -i (soka- *say*, takka- *see*, tani- *come*, noni- *arrive*, wisi- *know*, naa- *go* (originally na-, **la-*), sii- *sit* (originally si-). Verbs may be composed with each other, forming lengthy compounds, but usually the last component

[11] That is, when fully stressed; when used as auxiliaries after a main verb, the shorter stem often remains.

is an auxiliary (for which see **9.1**, **9.2**). Verbs may be derived by prefixes and suffixes; of the latter the most common are -kua- and *-wa-, to which may be added the adverbial -mo- and -pala-. Verbal prefixes are very common; we may mention: a'-,[12] ai-, ap-, apin-, ar-, in-, mai-, nai-, par-, pen-, pur-, tar-, tur-, wis-. These prefixes are often adverbs in their origin, but in many cases their precise function is not apparent.

Apart from the regular prefixes, there are initial vocalic elements (a-, e-, i-, o-), with which we shall deal separately (**8.4**).

8.2. Derivation by means of suffixes. By -kua- inchoative verbs are expressed: si-kua- *sit down, come into a sitting position* (cf. sii- *sit*, sika- *sit down*), tun-kua- *become big, grow up* (from tumma- *great, big*), nu-kua- *become well, recover* (cf. nueti *good*). By -wa- both inchoative and causative verbs are formed; according to a Cuna phonetic law, aw is changed into o, whence these verbs practically always end in -oa-: tummoa- *grow big* (from *tumma-wa-), kannoa- *grow strong, make strong* (from kanna- *strong*).

The other two have adverbial functions: -moa-, -moka- renders *also*, -pala- *again*: itto-moe *hears too*, na-mokoe *will go too*, tani-paloe *will come again, will return*. These elements are rather to be considered as adverbs incorporated into the verbal form (cf. moka *also, too*, pali *again*; see **11**).

8.3. Verbal prefixes. The meanings of the verbal prefixes, as far as they can be ascertained, appear from the examples given below: a'- has at least two different functions: to express reflexive forms: an-nukka- *wash oneself* (e-nukka- *wash another*); as a privative or negative prefix: an-nira- *loosen, untie* (e-nira- *stick, fasten*).

ai- (originally ak-, cf. **1.3**) appears to denote *motion through space*, and actually renders both *up* and *down*: ai-nakkwa- *rise*, ai-tika- *descend*.

ap- (originally api-) and apin- (originally apinni-, cf. in-, below) correspond approximately to English *against*: ap-soka- *converse, answer*, apin-kua- *come against*, i.e., *meet*.

ar- often denotes *down*, as in ar-kwana- *fall*, but has other meanings as well, as in ar-kaa- *open, discover*, etc.[13]

in (originally inni-) probably originally means *in front*, but has also other meanings: in-saa- *think, presume* (from saa- *make*).

mai- (originally maka-, mak-, cf. **1.3**) expresses among other ideas that of possibility: mak-ittoa- *be able to hear*.

nai- (originally naka-, nak-, cf. **1.3**) probably denotes vicinity: nai-sikka- *put near* or *at*.

par- (originally pali-: cf. the homophonous postposition, **12**) often seems to denote completion; par-takka- *examine* (from takka- *see*).

pen- (originally penne-) occurs for instance in pen-takka- *help, aid*.

pur- (originally pule- *more?*) occurs in pur-takka- *reflect, mirror*.

tar- (originally tale- or talle-: cf. the adverb talle *together*) means perhaps *between*: tar-kwiskua- *come* (*and stand*) *inside*.

tur- (originally tuli-?) occurs in tur-takka- *learn*, and perhaps in at-tur-saa- *steal, rob*.

wis- expresses either a *wish* or the idea of *a little* (whence we may perhaps suppose that it originally served to render a modest or polite request): an-wis-takke *I desire to see* (*a little*).

8.4. The prefixes a-, e-, i-, o- differ from those already mentioned by their shorter form and by the absence of a consonantal characteristic. The fact that these prefixes consist of single vowels, while grammatical functions as well as concrete meanings are usually expressed by at least one consonant element, lets us suspect that they are historically of a different type.[14] It would be

[12] By the apostrophe (') we denote a lost (implosive) consonant, which causes gemination of a following consonant.

[13] It should be noted that the Cuna adverbs (as well as the post-positions) do not properly express any special direction, but merely various kinds of locality.

[14] There hardly exists in Cuna a single noun or verb stem consisting of vowels only. It must then be remembered that forms such as ai *friend*, ua

interesting if it could be definitely proved that these vowels in Cuna are of the same nature as the "vocalic element" or "vocalic character" found in Iroquoian, as well as in many other American languages.[15] I have suggested the term prefix vowel for a formative of this kind, implying by this designation that the vowel often forms an essential part of a personal or other prefix, in which it may express the syntactical relation between the pronoun and the verbal action. The latter function is not found in Cuna, but a-, e-, i- and o- in all probability originally modified the verbal action in reference to the agent.

In Cuna e- and o- only are productive. Of the others a-, for instance, is found in a-pea- *love, desire* (cf. pea- *wish, want*), and i- (perhaps originally instrumental) in i-makka- *make* (cf. -makka-, *idem*, in compounds), but their precise function is not apparent in Cuna. By e- the verbal action is expressed as directly depending on the subject of the verb and exerted on an object, as in an(i)-e-nukke *I wash* (*someone*), whereas by o- it is expressed as transferred from the subject to the object, as in an(i)-o-nukke *I let* or *make* (*someone*) *wash*. By the latter prefix vowel *causative* verbs are formed. In both constructions three operating factors are discernible: the subject or agent; the first (indirect) object (in this case a person); the second (implied or direct) object (in this case the thing washed off). When there is only one object of a verb, no prefix vowel is used: an-takke *I see* (*him, her, it*) or (*he,she*) *sees me*.

8.5. A pronominal subject or object is expressed by personal prefixes, which are historically the same as the possessive prefixes (see **4.8**). Consequently singular forms only can be expressed in this mode. In intransitive verbs the prefix refers to the subject of the verb (an(i)-nae *I go*, pe-nae *you go*, a-nae *he goes*) whereas in transitive verbs it may refer either to the subject or the object (an(i)-takke *I see him* or *he sees me*, pe-takke *you see him* or *he sees you*, a-takke *he sees* (*him*),[16] e-takke (*he*) *sees him*[16]).

To express the plural, the suffix -mala (see **4.5**) is added (the preceding vowel of the verbal stem being currently syncopated): an(i)-na-mala *we go*, pe-na-mala *you* (pl.) *go*, a-na-mala *they go*.

In transitive verbs -mala pluralizes the object only[17] (an(i)-tai-mala *he sees us*, pe-tai-mala *he sees you* (pl.), e-tai-mala *he sees them*) whereas a plural subject must be expressed by a plural personal pronoun: anmal takke *we see* (*him, her*), pemal takke *you* (pl.) *see him*. The use of -mala is conditioned by the capacity of this element to express functional unity or joint action (see **4.5**), on the basis of the supposition that a plural subject or object presupposes unity of action.

8.6. We may distinguish between the following tense and mode forms in the simple verbal inflection in Cuna: (1) present (also used as imperative), (2) future (also used as imperative), (3) narrative preterit, (4) completive preterit, (5) resultative preterit, to which come (6) the gerund, (7) the active participle, and (8) the passive participle. In all of these tense and mode forms (except perhaps the participles) a pronominal subject or object may be expressed according to the same principles as we have stated in the preceding paragraphs. The present form in particular may also serve as verb noun, especially with a postposition: takke kala *in order to see*; otherwise the verb noun is identical in form with the active participle (see **8.13**).

fish originally had (or may have had) a semivowel; cf. the older or alternative forms aya, uwa.

[15] The former is used by Barbeau, the latter by Boas (see C. M. Barbeau, Classification of Iroquoian radicals, in Canadian Department of Mines, memoir 46, No. 7 (Anthropological series).

[16] The difference between the last two constructions seems to be that the former requires a nominal object, the latter a nominal subject.

[17] Cf. the same rule in Mataco; see R. J. Hunt, Mataco-English and English-Mataco Dictionary, in Ethnological Studies 5 (Göteborg, 1937).

8.7. Present. From verbs in -a, this tense is formed by changing the final vowel into -e (from *a-i); stems in -i remain unchanged: soke (syncopated soi-) *say* (from soka-), takke (syncopated tai-) *see* (from takka-), tani *come*, wisi *know*; in a limited number of verbs the final -a is not changed into -e: nikka *have, be*, tula *be alive*.

In a certain number of verbs, the present is formed by an extension, chiefly by means of any of the formatives -ka-, -na-, -la- or -ya-: si-ke *sit down* (cf. sii *sit*), me-ke *lie down* (cf. mai *lie*), arkwa-ne *fall* (original stem arkwa-), ko-le *call* (original stem ko-), tip-ye *roast* (original stem tippi-). A larger number of verbs (to which probably belong soka- *say* and takka- *see*) originally contain petrified presentic formatives (-ka- and -kka-).

8.8. Future. The future tense is always formed from the present stem, by changing the original terminating -a into -oa- (from *a-wa; see **8.2**), whence ultimately we obtain a form in -oe (or syncopated -o; cf. the present, **8.7**); the future is thus formally (and historically) identical with the inchoative stem in -oa- (see **8.2**), although functionally quite different (as the verbs in -oa- may again form a future in this way; cf. below): sokoe *will say*, takkoe *will see*, sikoe *will sit down*, mekoe *will lie down;* verbs in -i usually form the future in -ioe (noni-oe *will arrive*), but sometimes in -oe (wis-oe *will know*). Since kw does not occur in front of o and u in Cuna, the future of nakkwa- *rise* is regularly nakkoe *will rise*. From verbs in -oa- (cf. above), we regularly get future forms in -ooe (tummooe *will grow big*).

8.9. Narrative preterit. This tense is similarly formed from the present stem, by addition of -na (sometimes syncopated -n) to the terminals -e, -i, or -a: takke-na *he saw* (*as he went*), mai-na *he was* (*lived*), nikka-na *he had*. The suffix -na is probably a form of the verb na(a)- *go* (cf. **8.1**), and the original meaning may have been *went about* (*doing*, etc.).

8.10. Completive preterit. By this term I designate a preterit that stresses the completion of a verbal action. It is chiefly formed from transitive verbs in -a, which is either changed into -i or syncopated before the tense characteristic -sa (syncopated -s): kopi-sa (or kop-sa) *drank* (from kopa-), topi-sa *feared* (from topa-), soi-sa *said*, tai-sa *saw* (from soka-, takka-, respectively). The tense suffix is probably a form of the verb sa(a)- *do, make* (tai-sa thus means *did see*).

8.11. Resultative preterit. The resultative preterit is formed, chiefly from (original) intransitive verbs, by means of the tense characteristic -ta-, -te (syncopated -t): na-te *is gone, has gone, went* (from naa-), ku-te *has come, is* (*there*), ko-te *has called* (probably originally *is heard*). From the preterit stem in -ta- there are derived forms in -tte (ko-tte *has called*) and -cha (from *-t-sa: ko-cha *has called, called*); of special importance is further the (originally) participial form in -ta-ppi (cf. **4.6**): na-tappi *all gone, is off* (from *na-ta-t-pi; cf. the participle na-te-t(i) *who has gone*). As to meaning the resultative preterit differs little from the completive preterit; if the latter denotes the direct completion of an action by the subject, the former may rather denote the result of an action as performed by the subject, and is thus in a way to be considered as a passive form. But this distinction is at most an historical one.

8.12. Gerund. The form which I call gerund is a semi-finite form, denoting a parenthetical verbal action, which sometimes seems clearly subordinate to that of a purely finite form (cf. the example in **13.2**). Formally it is derived (usually from the present stem of the verb) by addition of the syllable -li, so that verbs whose stem ends in -a usually forms the gerund in -ali; the few verbs in -i, which form a gerund, add -ali (the gerund thus ending in -iali), and some verbs in -a likewise form the gerund in -iali (by changing the stem-final -a into -i, as in the preterit; cf. **8.10**). If a consonant precedes the stem-terminal vowel, it is geminated: sokka-li *saying, as* (*he*) *said*, [or

simply, *says*, *said* (from soka-), ekicha-li *asking* (from ekisa-; cf. **1.2**), kolla-li *calling* (from ko-la-; cf. **8.7**), but ittoa-li *hearing* (from ittoa-), patti-ali *falling* (from patta-): marli-ali *breaking* (from mara-).[18]

8.13. Active participle. The active participle is formed from the present or preterit by addition of the suffix -ti (syncopated -t) or -tti (the former is more often used after e, the latter after -a or -i): soke-t(i) *saying*, takke-t(i) *seeing*, nikka-tti *having*, nate-t(i) *having gone*, kocha-tti *having called*. The form thus arising expresses a true active participle, a relative form (there is no relative pronoun in Cuna), or a verb noun (soke-ti = the *action of saying*).

The same suffix is frequently added to nouns and adjectives as well (cf. -ti, -tu in Arawak), originally perhaps as a distinctive noun element: neu-ti *good* (here perhaps added to a verb stem nua- *be good*), sipukwa-t *white* (cf. **5**), inatule-ti *medicine man* (cf. ina *medicine*, tule *man*), etc.[19] Sometimes its use appears to be quite arbitrary.

8.14. Passive participle. The passive participle ends in -le, added to the verbal stem: soka-le *said*, takka-le *seen*, ittoa-le *heard*, tippi-le *roasted*. To it may be added (especially in attributive construction) the participial -ti, -t (see the preceding section). The element -le- itself is related to the nominal suffix -la (see **4.2**) on one hand and to the passive formative -lea- (see **8.15**) on the other.

8.15. The Cuna passive is rather an impersonal form. Its characteristic is the formative -lea-, which is evidently related to the similar element described in the preceding section. The passive formative is (unlike the participial -le) added to the syncopated verbal stem: tai-lea- *be seen, visible* (from takka-; cf. takka-le *seen*), itto-lea- *be heard, audible* (from ittoa-; cf. ittoa-le *heard*). The passive form can be made for practically all tenses and modes (the present and future being usually formed by -ka-; cf. **8.7**): tai-leke (or taile) *is seen*, tailekoe *will be seen*, tailesa *appeared*, taileali *appearing* (gerund), tailesat(ti) *which appeared*. Some verbs, which were originally passive (ko-la- *call*, lit. *be heard*; cf. **8.7, 8.11**), although otherwise construed as active, do not seem to form a passive in -lea-.

9. Auxiliary verbs.

9.1. The auxiliary verbs are usually added to the present form of the main verb, with or without syncopation of its last vowel. There are two classes of auxiliaries, which we may term respectively coordinative and subordinative, according to whether the verbal action of the main verb is coordinated (contemporary) with or subordinated to that of the auxiliary.

9.2. The coordinative auxiliaries are those expressing a particular position of the body while the action of the main verb is performed.

-mai originally expresses *lying* position: kape-mai (kam-mai) *lie asleep*, but it apparently also expresses continuation of a verbal action, as in aparmai-mai *run all the time*. As an independent verb, mai also means *live, dwell*.

-nai probably originally expresses performance of a verbal action while *walking* or *in motion* (cf. naa- *go*), but this concrete sense is seldom clearly visible.

-sii (also -si; cf. **8.1**) expresses *sitting* position: arpa-si *sit working*, kape-si *sit sleeping*.

-kwichi is used to express the performance of a verbal action either *standing* or *walking:* arpa-kwichi *stand working*, noe-kwichi *go out, leave walking* (or *on foot*).

-yola or -yolaki (which appear to be related to the passive stem yo-lea- *be found*, from yoa- *put, place*) express situation in general (as Spanish *encontrarse*).

9.3. The use of the above auxiliaries in

[18] It is doubtful whether -rl- is phonologically distinct from -r(r)-, which latter appears a more recent simplified form; cf. the popular personal name Chiari *Charlie*.

[19] Although the meaning and usage of this -ti is sometimes very different from that of the active participle, I have found it difficult to draw a sharp line of distinction between either.

Cuna is often important in order to make the meaning of a sentence clear. Thus, a man is often referred to by -kwichi *stand* or *walk*, a bird, by -si(i) *sit*, while most inanimate things, when subject of a verb, are expressed by -yola or -yolaki (*be found*). Curiously, even personified dead objects seem to be referred to by the latter two auxiliaries.

9.4. In the subordinative group of auxiliaries we may mention -nae, -kue, -pie, -pee, -tae, -take and -makka-.

-nae, which is to be distinguished from -nai (see **9.2**), means *go*, and subordinates the action of the main verb (as in English *go to see*). Thus while Cuna an-takke-nai means *I go about seeing* (or simply *I am seeing*), an-takke-nae closely corresponds to the Spanish *voy a ver*, or the English *I am going to see* (i.e., *I will see*).

-kue originally seems to express the idea of *coming*, but this sense is paled. It is often hard to distinguish between this auxiliary and the homophonous verbal suffix (see **8.2**); cf. an-top(e)- kue *I begin to fear* (suffix) or *I come to fear* (Spanish *vengo a temer;* auxiliary). In its completive preterit form (-kusa), it merely expresses the completion of an action.[20]

-pie and -pee both express *will* or *desire:* an-takke-pie *I will see*. The latter is also used as an independent verb wish, *desire*, evidently related to the verb apea- *desire, love* (see **8.4**).

-tae expresses habituality: an-sappur-pana-tae *I am in the habit of going to the woods* (*hunting*, etc.); the auxiliary -tae, which is no doubt related to the resultative -te (see **8.11**), probably expresses the idea of *being off on a certain course*.

-take (originally from -ta- *go, be off*, with presentic -ka-, see **8.7**)[21] is the current auxiliary expressing *to come:* soke-take *come to say;* it is also used in the future, e.g., soi-takoe *will come to say* (Spanish *vendrá a decir, viene a decir*).

-makka- is inflected as the independent i-makka- *do, make something* (or with *something?*), with which it is related; it is always used in composition with a preceding noun or verb: ko(o)r-makka- *make a noise, shout* (from ko-la, *call;* see **8.7**). In a similar way we also find the verb saa- *do, make* used.

10. The substantive verb is nikka *to be* or *to have* from which a future (nikkuoe *will be, have, get*), a narrative preterit (nikkana *there was, he had*) as well as an inchoative completive preterit (nikkusa *there came, he got*) are formed. The double use as a transitive as well as an intransitive verb is noteworthy: an(i)-nikka means both *I am* and *I have* (although the use of a personal subject naturally tends to eliminate the former meaning, so that the chances for ambiguity are practically none). The explanation of the double meaning is to be found in the possessive origin of the personal prefixes (cf. **8.5**): an(i)-nikka properly meant *my being there*, in which *being there* could be construed so as to refer either to the owner or to the thing owned (in the same way we may explain the active construction of original passive verbs, see **8.15**). The plural of nikka is sometimes expressed by a special verb, pukkwa (or pui-mala; cf. **1.3**) *they are*, which in its origin is probably a noun (= *many;* cf. pukki, pukkipa *much, many*).

11. Adverbs. Any adjective may without change of form be used adverbially: nue-takka- *see well*, i.e., *care for, repair* (cf. nue-ti *good*).

Among the true adverbs we first of all have to mention the negations, of which there are three main types, represented by suli (sul, sur), keke (kek), and melle (mel, mer), respectively. Of these the first (suli), which follows the verb, is used to negate plain statements: takke-suli *not see*, nikka-suli *not be* or *have*, Of the others, which precede the verb, keke expresses impossi-

[20] It appears that in the forms -ku-sa and -na-sa (instead of the regular -ku-te, -na-te) the transitive preterit suffix -sa is used to comply with a preceding transitive main verb.

[21] Cf. the same -ta- in soi-ta-paloe *will (go to) say again*.

bility: kek-attakke *cannot see*, while melle expresses a negative wish or a prohibition: melle-nae *I do not wish that we go, let us not go*, or simply, *don't go*.[22]

There exists a great number of other adverbs, the most common being kepe *at first* (also *then*, Spanish *luego*), ye *already* (cf. the same form in Nahuatl), ampa *still, all the time*, pali *again*, moka *also* (cf. **8.2**). A special class is formed by those derived from pronominal stems, such as itti-ki *here* (lit. *at this*), we-ki *so, thus* (cf. **7.2**): also iki, inkua, pia (see **7.3**). As we have already said (**8.1**), many of the verbal prefixes are originally adverbs.

12. Postpositions fall in three main categories: simple, compound, and verbal.

Among the former we notice especially ka *to* (mostly non-local); se *to* (mostly local); pa, pakka *with*; pali *by, through;* ki, kine *in, at, by;* seka *to, unto;* sikki *toward*. (Many of these forms occur in Nahuatl.) The postposition is placed after the noun, which often occurs in its syncopated form: neka se (nek se, nei se, cf. **1.3**) *to the house*. With a preceding possessive prefix (see **4.8**) we get, for instance, an-ka *to, for me* (chiefly dative sense), pe-se *to you* (chiefly local sense), e-ki *by means of it*, perfectly in analogy with the construction in Nahuatl. In the plural the construction is modified (cp. **4.8**): anmal pakka *with us*).

The compound postpositions are of the type pilli-ki(ne), pir-ki(ne) *on top of*, ulupali, ur-pali *below, under*, tale-pa, tar-pa *between*: they consist of a nominal part (pilli *superior*, ulu *inferior*, tale *space*) and a simple postposition. The syntactical construction is either with a noun (neka pillikine *above the house*) or with a possessive prefix (an-ur-pali *below me*).

Of the verbal postpositions we may especially mention -kuale *in, at, to, like:* kas-kuale *in the hammock* (kachi *hammock*). Originally a form of the verb kua- *come, be*, it evidently expresses the idea of *coming to* or *being at*.[23]

13. Conjunctions.

13.1. Apart from the adverbial teki, tekine *and* (lit. *at this;* cf. Nahuatl ī-huān *with it*, i.e., *and*), patio, pat *but* (as adverb *already*), the Cuna conjunctions are typically of the subordinative kind. The oldest type of these conjunctions consists of certain enclitic particles, such as -le, -te, -na, -ti, -tina, which are affixed to verbal forms (often the present form) to express very different functions.

As most primitive we may perhaps accept the imperative-interrogative function, as in soke-le *say* or *shall we say?* (whether the request was originally a polite question or the question originally a request to tell, is impossible to decide). From this primitive meaning the conditional sense arose, as in soke-le *if we say* or simply *if* (cf. English *suppose* = *if we suppose*, i.e., *if*); further we may get a causal sense, a merely emphatic sense, etc. All meanings may not be found in every one of the mentioned particles, but it is usually difficult to fix any special sense as typical of or prevailing in any special particle.

In the emphatic sense some of these particles may be added to nouns and pronouns as well. This is especially true of -na, -ti and -tina, which are used to single out words as important in the sentence: anti-na *as for me* (lit. *if it is me*), emal-tine *as for the others*.

It is likely that these enclitics were originally introductory particles of the following main clause, as still appears in the use of the derived conjunctions ale (ar) and ate, which mean *therefore*: taisa-le an-wisi *because* (*I*)

[22] Notice that the form without any personal prefix is often used as an inclusive form, i.e., one expressing *you and I* or *we and you*.

[23] Perhaps a form analogous to those in -e-le (see **13.1**). Forms in -a and -e often interchange throughout the Cuna grammar, whether in the nouns or in the verbs. Although I have tried to give the normal forms in this grammatical sketch, it must be remembered that a great number of variants are possible and actually found.

saw, I know or an-taisa, ale (ar) an-wisi *I saw, therefore I know.*

Another type consists of postpositions added to verbal forms to express subordination: an-takke-kine *when I see* or *have seen,* literally, *at my seeing;* similarly takke-kuale *as if he saw.* This construction is conditioned by the nominal origin of every verbal form (cf. **1.9**). In the same way postpositions may be added to participial and gerundial forms also: ainakkwe-ti-kine *where he (it) rises* (lit. *at his rising*).

13.2. A point of special interest is the existence of a conjunction ka in the sense of *and* or *then, when,* i.e., an original connective adverb with a tendency to become a subordinating conjunction in the enclitic construction (**13.1**). Such a form is found in the related Rama language (Costa Rica) and in some others, where it plays an important part. In Cuna the form ka often precedes forms of the verbs soka- *say* and ukka- *give,* and has therefore been considered as a dative mark (*say to, give to;* cf. **4.3**). Should such an expression as aparmaali neka seka . . . ka soisa be analyzed as *running home . . . , to (her) said* or as *running home . . . , then (he) said* (it may be remarked that *to her* normally corresponds to e-ka in Cuna)?[24]

1.4 Of the interjections we shall merely mention the articulate forms eye *yes* and etto *well.* The former doubtless contains the adverb ye *already* (see **11**), and although de Puydt (cf. Prince's article in *Amer. Anthr.* vol. 15) gives a nasalized form ee, it is likely that Cuna eye has nothing to do with the widely distributed American Indian ãhã (which latter may occur as a variant even among Cuna speakers). The common words of salutation, naa *I have come* (cf. naa- *go,* **8.1**) and tekimala *good-by* (perhaps = *so together*) may also be reckoned among the interjections.

[24] It might perhaps be worth while to point out that a similar conjunction (ka) is found in very similar constructions in the Polynesian languages, and even in Bantu.

THE SUBJUNCTIVE IN FOX[1]

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The morphological distinction between the subjunctive and the conjunctive forms, first pointed out by William Jones (BAE-B40.1,820), has been discussed by Bloomfield (IJAL 4.204,211), and in numerous places in the Bulletins of the BAE by Michelson, and has been set out in a previous article by the present writer (IJAL 11.169–81). The essential point is that subjunctive forms always end in -e, while conjunctive forms generally end in -i (with the exception of the forms involving the 1st and 2nd persons plural as subject or object, these having -e like the subjunctive). The subjunctive has two forms, a simpler form in -e, called by Jones the 'present subjunctive', and an extended form in -e'e which Jones called the 'past subjunctive', but which Bloomfield called the 'unreal mode' (IJAL 4.211 [1927]); there are exceptions here also in the forms involving the 1st plural inclusive and the 2nd plural as subject or object, for here the expected -kwe'e appears as -ku'a, with -u- for interconsonantal -we- (which is normal, barring archaism or restoration) and a change of -e to -a which appears to fall into the category of umlaut-changes.

Syntactically, the difference between the two modes is that the conjunctive always appears in a subordinate clause (but note that while a negative clause or sentence, introduced by ākwi and containing a conjunct verb + -ni, is syntactically a subordinate clause, it has to rank semantically as a principal clause, since Fox has no other way of framing an independent negative statement, though Ojibwa and Algonkin use kā with the indicative mode in this case; in a clearly subordinate clause, Fox uses pwāwi- as a negative particle in composition with a conjunct verb without -ni). On the contrary the subjunctive is used not only in subordinate clauses but also in principal clauses.

From the semantic point of view, the conjunctive expresses actions, states, etc., as facts, or as regarded as facts, the time depending on the context; e.g. the particle acawaye *long ago* indicates past time, while the particle īnāmi'ta'i *that is the time it is bound to be* points to the future; the future is implied also (as it is likewise in the independent mode) when wī'- is prefixt to express a wish, or permission, or a mild command; the basic meaning of wī'- being *wish*, we have here a close parallel to the use of corresponding words in English and some other languages to indicate futurity, for it seems to be true that in Fox the meaning *wish* is often quite vague. Another stem which expresses future time in conjunctive verbs is āmi-, which indicates what *is firmly expected* or *is bound to happen factually*, regardless of what is desired or deprecated. It is evident that future time is implied by the meaning of these two stems, and that there is no morphological distinction of tenses in Fox.

In the subjunctive, the meaning is more theoretical or ideal than factual. In the case of wishes and in temporal clauses there is a strong future implication. But in the expression of unfulfilled conditions, it is the theoretical view-point that is emphasized rather than time, for these cases apply to past, present, or future; and this same view-point applies to the use of the so-called 'past subjunctive' in non-committal traditional statements (cf. IJAL 11.173).

The subjunctive in a co-ordinate or principal clause expresses a WISH. It is often difficult, in a Fox sentence, to distinguish

[1] Abbreviations used: B105 and B85 are used in place of BAE-B105 and BAE-B85 for the location of examples cited from these texts; CC = changed conjunct.

WISH, PURPOSE and RESULT, and I am not sure the Fox Indians make any such distinctions; e.g. tasōnōki ānānematci, īni nā'nīna wī'iciketeminamōnāni, äyīki nīna 'anemi'atamāyāne 'ā'kunäwa *as many ways as you blessed him, that [is] how I also wish to bless him for your sake, that I too may continually have a smoke of tobacco* B105.132.17–8. However, the following is a clear case of a wish: wī'inānemiyāke pemātesiweni *may you bless me with life* B105.136.5; there is no other verb on which a conjunct could depend, and the whole context expresses a prayer. It is a practical rule that an ambiguous form, unchanged and not preceded by ākwi, if it constitutes the whole sentence, expresses a wish.

The subjunctive in a subordinate clause expresses either a *when*-clause or an *if*-clause. Frequently it is difficult to decide definitely which sort of clause is intended. A temporal clause is clearly present in cases like wāpake *when it is dawn, tomorrow morning*, metāswawa'īmaka'ke *when ten years are counted, ten years from now*. A doubtful case is seen in wī'utcike'kānemakwe, käkō'i inānetamowāte uwīyāwāwi *so that we shall* (or, *as we desire to*) *thereby know about them when*, (or, *if*) *they think anything of themselves* B105.126.43. In English, too, *when* is often used in cases where *if* would be more exact: cf. 'When the wind blows the cradle will rock, When the bough breaks the cradle will fall . . . ', where the second *when* really means *if*, indicating an eventuality that is actually deprecated. In conditional sentences, the subjunctive is used regularly in the protasis; in fact, I know of no clear case where the subjunctive (either 'present' or 'past') is not used.

The citations are from BAE-B105 and the portion of BAE-B85 that relates to the Fox Ceremonial Runners used in previous papers, and in addition from BAE-R40.296–336, the Autobiography of a Fox Woman, this last-named piece being used because of its narrative style (though all the texts used are partly narrative), in order to offset the archaizing tendency of set, traditional, quasi-ritual speeches used in religious observances. The examples are given in the following order:

1. Principal clauses, expressing a wish (partly, perhaps, purpose or anticipated result);
2. Subordinate clauses, expressing
   a. temporal or *when*-clauses; or
   b. conditional or *if*-clauses.

1. Wish (purpose, result):

tānina'i mā'ani mesōtäwi-meku'u ke'kānetamowāte *would that they all would know these* (*songs*) B105.76.17.

tānina'i mana'a nekuti-meku'u ke'kānetake *would that this one person would know them* B105.76.18.

tānina'i mesōtäwi-meku kekimesi ke'kānetamowāte mani äci'tcikäweniwiniki kekīkänōnä'enäni *would that everyone would know all about the performance of this modest ritual feast of ours* B105.76.19.

tānina'i wītcawiwake *would that I might live with* (= *marry*) *her* BAE-R40.326.14.

tānina'i kakanōnetīyāne *would that I might talk with him often* BAE-R40.312.24.

nā'ka wī'pwäwi-mayäckäkwiyāke matci'a'penäweni *and may we not be struck down by evil disease* B105.136.6–7. The use of wī'- with the subjunctive is not usual, and looks like a contamination with wī'- + conjunct, based on the optative meaning common to both (due to the stem wī'- *wish* in the former).

īni-tcā'-nä' anemici-keke *and may this very thing come to be* B105.138.32.

pāci mana'k ä'ke'kyäweniwiki, kackowäyāke ä'mamätomoyāke *even when in the distant future old age comes, may our prayers be heard when we ask* (*something*) B105.138.-35–6.

īni-tcā'-āmi'ta'i natawi-nakaciyāke *now, indeed, it is time that you should think of leaving us* B105.138.36.

necwācika-tcā'i tasukunaka'ke mecemekōna'i wīna *let it be eight days from now, at any rate* (*that we reassemble*) B105.66.2.

nāpi-tcā'-meku wītamawake nītci-mane-

towaki *rather, indeed, let me tell my fellow-manitous* B105.124.38.

2. a. Subordinate, temporal clause:

mā'aki kākākīwaki näwāwāte īni'i wītekowa'i, īni-meku ä'wäpi-meku- wāpaci'-āwātci *when these crows see those owls, then at once they begin to make sport of them* B105.22.9.

kīci-pyätci-penowāte, īnuki-meku nä'-kīnāna ki'nākwāpena *when they have started hither at full speed, at the same moment we too shall depart* B105.24.7–8.

Īninā'-meku'u me'tenō'i nyäwukunakatenike wī'näwunakwe *only then, when four days are up, [is] when he will see us* B105.-24.10–1.

īni-tcā' pōnipyämika'ke wāsäyāwi, īni wī'a'kwänemenāni *at the very time when daylight ceases to come, that [is the time] up to which I shall think of you* B105.38.8.

mani nā'katci ku'kinākwa'ke keta'kimenāni, īni nā'katci wī'utci-meku'u-pemike'-känetamani *moreover, when this earth of ours changes its appearance, then also [is when] you will begin to know about it* B105.38.9.

mämätciki-meku'u kutaki kīcäme'kisetōke, īni kīna wī'utci-meku'u-pemike'känetamani-meku *and surely when another earth has been made, then [is when] you will begin to know about it* B105.38.10–1.

ōni kīci-pīn-äme'kisetōte manetowa, īni nā'ka wī'utci-meku'u-pemike'känetamani *and when the manitou has set up a new earth, then again you will begin to know about this* B105.40.29.

wāpake wī'māwatciwetōyäkwe 'ayō'i kākō' ä'tō'iwäkwäni, wāpake kīcinäwa'-kwäke *tomorrow* (lit. *when day comes*) *you will bring together here anything that you may have, tomorrow afternoon* (lit. *when it is day, when it has passed the middle of the sun's course*) B105.54.38.

me'tenō'i-meku'u näwitepe'kwīnike, īni wī'nawatci-nowī-wātci *only when it is midnight, then [is when] they will first go out* B105.56.33–4.

wāpake, ayō'-meku nī'utcitō'kīpena *when it is the morrow, we shall awake here* B105.-62.10.

ōni katawi-wāpanike, wī'pekecäniki *and when it is nearly daylight, it will be hazy* B105.62.36.

ku'känetake manetowa man utō'kimi, īni mani'i wī'a'kwimikateki mani'i mīcāmi *when the manitou thinks of changing this earth of his, that [is the time] up to which this sacred bundle will be powerful* B105.76.26.

metäsw-awa'īm-aka'ke, īni wī'ke'känetamakwe wī'tasenukwäni ke-kīkänowi-ke-nakamōnenänani *when ten years are up, then [is when] you will know how many our ritual-feast-songs will be* B105.82.18.

me'tenō'-meku mämetcinä'i nīmiw-a 'amakwe, īni mäne'e wī'ayōyakwe *only when we sing dancing-songs for the last time, then [is when] we shall use many of them* B105.82.22.

wītämakete natupanite, nenīwa-meku wī'-nesaketci īni äcinatotäsaketci *when we accompany (someone) when he goes on the war-path, that we kill a warrior [is] what we ask of them* B105.96.35–6. [Lege natupaninite].

Other exx. B105.98.1, 18–9,34; 102.3,34; 124.31;124.31;126.13,41,44; 134.13;146.30, 32,35; 148.10,13-4; 170.12; B85.4.13,14; 10. 11,27; 22.42; 14.5–6,20,38,43,44; 26.6,7,19, 29; 28.1,11,17; 30.25; 32.9–10,43; 34.8,9,13–4,34; 36.34,35,38; 38.7–8,28,29,35,36.

2. b. Subordinate, conditional clause:

There are eight types of conditional sentences, all with the subjunctive ('present' or 'past') in the protasis; the apodosis may have the indicative (or a CC), potential, potential subjunctive, past subjunctive, prohibitive (and the present subjunctive in one type of which I have found no examples in reliably printed texts).

Type 1. Simple condition, present subjunctive in the protasis, factual statement in the apodosis, involving the indicative or an equivalent (e.g. äkwi + conjunct + -ni, a CC in an equation, or an interrogative conjunct); if future time is envisaged in the apodosis, the statement may be called 'more vivid'.

īniki-tcā'i nepō'iwāte, kī'mayōpwameku'u *if, indeed, those die, you will, indeed, weep* B105.76.41. [kī'- here has evidently lost the meaning of *wish* and signifies futurity, unless it means *feel like;* the influence of European languages re-enforces the tendency to indicate futurity by means of wī'-].

tcīnawāmākwa nā'katci nepō'ite, īni-meku' wī'icimyācitä'äyäkwe *and if one whom you have as a relative dies, the same [is how] you will feel badly* B105.76.43.

pwāwi-na'ina'i-käkō'i-ke'känetake, āmicawiwäkwäni īna'i? *if he does not know anything about doing it properly, what will you do then?* B105.66.40.

There are 92 other exx. in the portion of texts covered: B105.22.23; 66.31,38,40; 78.20,22; 90.38–9; 96.15; 104.43; 106.3,5–6,8–9; 128.7–8; 130.28,44; 136.8–9,13–5,25–6; 134.26–7; 152.17–9; 166.31; 168.20; 28.23; 34.25; 36.3,3–4,9; 38.27; 44.12–3,13–4; 60.40; 76.35; 78.29; 96.9,21–3,24–5; 100.35–6; 134.15–6; 82.41. B85.12.7,37; 16.24–5; 6.12–4; 8.13; 10.32,36,40–1; 20.7–8; 22.38,41; 24.29,45; 26.2,19,21,37; 28.33; 30.27; 34.2,11; 36.32–3. BAE-R40.306.13–4,14–5,15–6,16–7,18–9,23,29–30,31–2; 308.16–17,17–8; 312.5; 322.44; 324.21–2; 326.12; 328.25–6,26–7; 330.26–7; 332.29–30,30; 334.15,27; 336.1–2. Nine other exx. contain kī'pene *if, however:* B105.20.29–30; 22.3–4; B85.24-25, 39–40; 30.12;32.29–30; 36.45; 24.31,33–4.

Type 2. Simple condition of the future, apodosis expresses a possibility or a permission, i.e. a less vivid statement; present subjunctive in the protasis, potential in the apodosis (always translated by means of the English potential mode with *may, might, can, could, would, should*).

neciwanätci'iyäkani ketawämäwaki pwäwi-wīkäsiyane *you might ruin your brothers, if you are not careful* BAE-R40.302.24–5.

ke'kinawäpamate-tcā' äci'tōtci-ni käkō'i, menwawi'kapa *if you observe (her) how she makes anything, you would do well* BAE-R40.-304.41. According to Jones's table, BAE-B40.1.804, -'kapa is potential, the potential subjunctive having -'ka'pa; but there is still some uncertainty, as -'kani occurs also as potential and in the *thou—him, them* forms only the potential subjunctive has the -pa ending. Cf. the preceding ex.

kīnwäwa-kä' icitä'äyäkwe, mece-meku pyätō'käku'a käkō'ä'i wī'watcä'oyakwe *if any of you desire, you may bring any little thing for us to cook* BAE-R40.596.43. Cited by Michelson, BAE-R40.614, the apodosis being described as expressing permissive potentiality.

No other exx. were found in the 122 octavo pages examined in this study.

Type 3. Condition refers to a future happening or is theoretical; apodosis is stated in the less vivid manner as not certain, even unlikely; present subjunctive in the protasis, potential subjunctive in the apodosis, negative expressed by awita.

mecena'-ku'-meku'u wī'keteminōnäkwe, keteminōnwäsa *if they desire to take pity on you in any way, they may take pity on you* B105.78.19.

wī'nesäkwe, īni-meku'u ici'ayi'ayīnekwām-ata'wiyäkäku'a *if you wish to kill them, then, indeed, you should strike them all down while they sleep* B105.28.27–8.

awita nanäci cäkwänemowäsa wītekowaki, 'ano'anō'känake *the owls would never be unwilling, (even) if I sent them on an errand repeatedly* B105.24.12.

me'tōtci ket-ukimämenäna neciyäkäku'a, nesäkwe *it would be the same as if you should kill our chief, if you should kill him* B105.32.-32–3.

And 20 other exx.: B105.78.11,26,29; 66.27–8; B85.4.20–1; 8.10,11; 18.16; BAE-R40.316.3–4; 324.5–8,8–9,27–8; 326.8,34–5; 330.28–9,45; 334.44; 336.3–4,7.

Type 4 may be classed with type 1 as a simple condition; it has the present subjunctive in the protasis and a prohibitive in the apodosis, replacing an indicative with wī'-pwāwi- to express a negative wish. The only two exx. I have found in the matter

explored may, indeed, have *when*-clauses rather than *if*-clauses:

kāta-tcā'i, pem-ākwanāwāte mece-meku, kāta pemi-'atā'penamawiyākāku *if, indeed, they merely put (the tobacco) in a pile, you must not immediately accept it from them (as if offered to you)* B105.126.18.

kāta-tcā-i, īnini pem-ākwanāwāte wanimōckwe, pem-atā'penamawiyākāku kōcisemenānaki *if they put them (the harvested crops) in a pile at random, you must not immediately accept them from our grandchildren (as offered to you)* B105.126.28.

Type 5. Past condition unfulfilled, theoretical conclusion stated in less vivid manner; present subjunctive in the protasis, past subjunctive with wī'- in the apodosis. The type seems to be rare; the only ex. I have is the one cited by Michelson, BAE-R40.614.

asāmi taswi; nekuti nesate kwīyena, īni wī'menwi-tcāk-a-m-aku'a *[there is] too much of it; if you had killed one (buffalo) of just the right size, then we would have eaten it all up with ease* BAE-R40.600.2–3. The analysis of the last verb is given, to show that it cannot be interpreted as anything else than a past subjunctive.

Type 6. Past or theoretical condition unfulfilled, conclusion theoretical; present subjunctive in the protasis, potential subjunctive in the apodosis.

kutakā'ite wīna, awita 'īni icawisa *if he were another sort of person (than he is), he would not act thus* (or, *have acted thus*) B105.30.32–3.

kākō'-mata icimyāneteke, mecāna'-mekuyātuke kīwi-kāckanasukini icawi'kā'a ātcimo'enakōwe *if there were anything at all evil in it, it certainly seems I should act like one who whispers things about, as I tell you* B105.88.11.

kīci-kā'i-mīcike, wāpi-meku'u-nānakamu' kā'a *if, indeed, I had been given them (the songs), I should begin to sing them all* B105.56.26.

āwasi-meku icikīcākutcitā'ā-nā'a, nānesete *one would feel worse (over losing a child) if he had been beaten* BAE-R40.320.25.

menwawi'kapa kutci, wī'ā'petci-wītcawitīyakwe icitā'āyane *you could have acted properly, if you (had) wished that we live together permanently* BAE-R40.322.25.

Seven other exx.: B105.36.28; 42.40–1; 46.43–4; 50.24; 102.1–2, BAE-R40.324.42–3; 326.43.

Type 7. Present or past condition unfulfilled, conclusion theoretical; past subjunctive in the protasis, potential in the apodosis.

īni ācawiyani pepōke'e-mata, sanaki'tō'-kapa *if it had been winter when you experienced that, you would have had a hard time* BAE-R40.304.3–4.

nepatci'kapa anenwiyane'e, pepyātciyukā'-meku nyāwenwi tcapōki-sa'o-'kapa *you would have been chilled if you bathed, as you would have leaped into the water four separate times* BAE-R40.304.4–5.

āwasī-meku iciketemākesi'kā'a, pwāwikīci-kekye'kimite'e nekya *I would have been even poorer, if my mother had not instructed me fully* BAE-R40.320.43.

unītcānesiyāne'e wīna, awita mecena'i nanāci nā'ka unāpāmi'kā'a *if, indeed, I had a child, I should never have married again at any time* BAE-R40.334.20–1.

Type 8. Past condition unfulfilled, conclusion theoretical; past subjunctive in protasis, potential subjunctive in the apodosis.

īna'wāna kutaka unāpāmiyane'e, īni kākō'-ici-mīnenenā'a *if you had married the other man, you would not have been given anything (as wedding-gifts)* BAE-R40.314.13–4.

nāpi nīna-yōwe kackimenāne'e, awita na'i-nesenakā'a *if I had persuaded you (to marry me) at that time, of course I would not have beaten you* BAE-R40.326.1.

īni-kā' icawiyane'e ānātcimo'enāni īnuki, awita īni icawi'kapa *if you had done as I now tell you, you would not have experienced that* BAE-R40.332.11–2.

In the Algonquian Sketch (BAE-B40.1.-841) William Jones gave an example of a past condition unfulfilled and a theoretical conclusion, with present subjunctive in both clauses: upitä'äte, pyämika'ke *he would be pleased, if it had come.* I have found no examples like this in the texts published by Michelson from MSS written by Fox Indians, and suspect that this really belongs to one of the above types, but is disguised by the loss of a final syllable, though I cannot form an opinion as to which particular type it represents.[2]

A merely apparent type of conditional sentence with a potential subjunctive in both the protasis and the apodosis, at first sight seeming to have a future condition stated as a possibility and a theoretical (or permissive) conclusion, occurs frequently in the texts. In reality, there is an unstated condition, which would normally require the subjunctive, implied in the context; the two potential subjunctives form a double apodosis expressing a theoretical conclusion, or else they are principal clauses expressing a permission or even an obligation. But the details of the use of the potential and the potential subjunctive (to use Jones's terms) require study based on the actual MSS. Here is an example of this apparent type of conditional sentence which is really type 3 with condition unstated:

mecäna'-meku äyä'p[w]āwi-wīseniwātci pyätci-penowāsa, ayō'utci-taci-wīseniwāsa [sic lege!] *of course, they should leave home before they eat, and here they should eat* (i.e. *if they do things in the customary way*) B105.108.36.

Other exx. of a potential subjunctive apodosis with suppression of the protasis are found in B105.22.11, 22; 24.11–2; 30.27–8; 80.1; 100.31; 110.2; 118.36; 138.9–11; B85.10.2–3; 12.7–8, 8–9; BAE-R40.324.11, 13,14,15,29,44; 326.15–6,44; 334.36–7,37,45; 336.6; 304.5.

I should have made it clear that I do not include the so-called potential subjunctive in my treatment of the subjunctive mode in this paper. The exact meaning of 'potential subjunctive' in relation to the 'subjunctive mode' is in need of clarification, and this is possible only on the basis of the MSS, which reflect the understanding of the authors regarding the nuances of meaning in these forms. The printed texts are over-normalized on the basis of pronunciation, and consequently deficient grammatically.

[2] My informant at Tama, Iowa, states (August, 1946) that the example is not good Fox, but should be upitä'äsa, pyämikatenike'e as in Type 7.

YUMA III: GRAMMATICAL PROCESSES AND THE NOUN[1]

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19. Word classes
20. Theme classes
21. Word formation
22. Formation of non-thematic elements
23. Theme formation
24. General remarks concerning the noun
25. Noun theme
26. Plural noun theme
27. Pronominal prefixes
28. Demonstrative suffixes
29. Locative -i
30. Case suffixes
31. Demonstratives, pronouns, and adverbs
32. Derivation of verb themes from noun themes

19. Word classes. The word consists of two types of immediate constituents, a theme and non-thematic elements. A theme may be defined as a morpheme or morpheme-complex to which increments of meaning may be added by affixation of non-thematic elements and which cannot itself be modified in structure without accompanying changes in its meaning. Non-thematic elements are affixes which are added to the theme without affecting its structure or meaning.

The word usually contains one or more non-thematic elements but may contain none or only such as are phonetically zero. Under appropriate conditions, therefore, the theme may occur as a free form. Non-thematic elements occur only as bound forms.

The syntactic function of the word depends on its non-thematic affixes. These are of two types: nominal affixes and verbal affixes. Three syntactic classes of words (parts of speech) may thus be distinguished: (a) nouns, i.e., words constructed of a theme plus nominal affixes; (b) verbs, i.e., words constructed of a theme plus verbal affixes; and (c) interjections, i.e., words constructed of a theme (generally of exclamatory meaning) to which no affixes can be added.

20. Theme classes. Noun themes are those themes which take only nominal affixes and from which verb themes may be derived by specific grammatical processes, such as suffixation of an attributive suffix -y: ʔaxá *water* >*ʔaxáy *to be damp;* or insertion of an intercalary a: kamnálʸ *rock* > kamanálʸ *to be stony, to be heavy as stone.* Verb themes are those themes which take verbal affixes and from which noun themes (verbal abstracts) may be derived in various ways, as, for example, by conjugation for the gerund: *ʔaxáy *to be damp* > ʔu·xáy *dampness, wateriness.* Interjectional themes undergo no grammatical changes.

Any verb theme may be used as a noun theme, but the reverse is not true. Thus *vatáy *big, to be big* may serve as the theme of a verb: vatáyk (< zero- 3 pr. pronominal prefix + *vatáy *to be big* + -k present-past suffix) *he is big;* or of a noun: vatáyəc (< *vatáy 'big' + -c nominative case suffix) *the big one.* The rather numerous examples of noun themes which are phonetically identical with verb themes are perhaps best explained as verbal abstracts: noun theme kʷaraʔák *old man* < verb theme *kʷaraʔák *to be, become an old man.* Sometimes a noun theme thus derived serves as the base from which another verb theme is derived: *ʔi·pá· *to be a man* > ʔi·pá· *man, male* > *ʔi·páy *to be human.*

A verb theme plus verbal non-thematic elements may also be used as a noun theme. Thus some noun themes contain elements which are in origin non-thematic. The word kaʔaðómək in the expression kaʔaðómək

[1] For Yuma I (**1** to **11**) and Yuma II (**12** to **18**), see IJAL 12.25–33 and 12.147–51 (1946).

ʔaðúwú·m *how shall I do it?* (lit. *how-am-I-able? would-I-do?*) is a verb whose theme is *aðóm *to be able* and whose non-thematic elements are a substantive prefix ka- *what?* a first-person pronominal prefix ʔ-, and a present-past suffix -k. The word kaʔaðóməc in the expression kaʔaðóməc ʔaðúwú·m *what kind of person would I be?* (Lit. *I-one-able-to-do-what? would-I-do?*) is a noun whose theme is *kaʔaðóm *I-one-able-to-do-what?* and whose non-thematic element is the nominative case suffix -c.

21. Word formation. The only grammatical processes employed in word-formation are prefixation and suffixation of non-thematic elements to the theme.

All non-thematic elements are restricted to certain positions of occurrence in relation to the theme and to other non-thematic elements. With the exception of substantive and locative prefixes of the verb, no two non-thematic elements belonging to the same positional class may occur in the same word. With these restrictions and the further restriction that nominal and verbal affixes do not co-occur as non-thematic elements in the same word, there is almost complete freedom in the selection of affixes. The noun theme may occur in the absolute form or with various combinations of affixes: camʔi·tó *melon*, ʔanʸcamʔi·tó (with ʔanʸ-1st per. possessive pronominal prefix) *my melon*, and camʔi·tónʸc (with -nʸ demonstrative suffix and -c nominative suffix) *that melon* all occur. The noun theme may occur without affixes as the first member of a nominal phrase, since affixes referring to the phrase as a whole are attached to the second member: paʔi·pá·c (paʔi·pá· *person* + -c nominative suffix) *the person*, but paʔi·pá· vaðác (*person this-one*) *this person*; xalʸʔáwəc *rabbit* but xalʸʔáw ʔanʸxáṭc (*rabbit the-my-domesticated-animal*) *my pet rabbit*.

The non-thematic elements of the verb are of various kinds. There are substantive prefixes, functioning as incorporated objects; locative prefixes, indicating the place where an action takes place; a modal prefix nʸa·- of conditional meaning; pronominal prefixes; and an imperative prefix k-. Suffixes may be classified as aspective, tense, tense-modal, and modal. The verb theme usually occurs with a pronominal or imperative prefix and a tense, tense-modal, or modal suffix: ʔayú·k (ʔ- 1st per. pronominal prefix + *ayú· *to see* + -k present-past tense suffix) *I see;* ʔayú·wú (ʔ- 1st per. + *ayú· *to see* +-ú hortatory tense-modal suffix) *let me see;* ʔayú·s (ʔ- 1st per. + *ayú· *to see* + -as dubitative modal suffix) *although I see*. The tense or tense-modal suffix may be omitted when the verb form is the first element of a verbal phrase whose second element is an auxiliary verb: ʔayú· ʔaʔí·m (*I-seeing I-say*) *I am going to see*, ʔayú·lʸʔaʔémək (< ʔayú· *I-seeing* alʸʔaʔémək *I-am-not*) *I do not see*. The verb theme may also occur in reduced form in certain verbal phrases. In such cases the theme occurs with no non-thematic affixes: mák aʔí·m (mák [reduced form of *amák] *coming-away* aʔí·m *he-says*) *away he comes;* páq aʔí·m *it makes a popping noise* (lit. *popping it-says*), compare apáq (< zero-3d per. pronominal prefix + *apáq *to burst (into bloom)* + -k present-past suffix) *flower blooms*.

The substantive, locative, and conditional prefixes are for the most part used optionally, adding separate increments of meaning to the verb theme. A certain number of verb themes, however, occur only with specific non-thematic prefixes, or are altered in meaning when in association with specific non-thematic prefixes. These may be designated as verb themes with adhering prefixes. An example of the first type is the theme *atí·š, which occurs only with the adhering prefix nʸi·-, as in nʸi·tí·šk (nʸi·- adhering prefix + zero- 3d per. pronominal prefix + *atí·š + -k present-past suffix) *he deceives*. An example of the second type is the theme *ʔi·páy, by itself meaning *to be alive, to be human*, but with the adhering prefix wa- (wa-*ʔi·páy) meaning *to be enlivened, to come to life*. The adhering prefixes occupy the

positions of and in some cases are phonetically identical with substantive and locative prefixes. In the majority of cases, no definite meaning can be ascribed to the adhering prefix itself; it is only the combination of adhering prefix and theme which has a meaning.

22. Formation of non-thematic elements. The non-thematic elements of the word are for the most part unanalyzable unit-morphemes. Some substantive and locative prefixes of the verb, however, are complex and must be regarded as composed of some pseudo-thematic or theme-derived elements, together with some exclusively non-thematic elements. The substantive prefix ʔac- *things* occurs in simple form in such a word as ʔacaðú·m *things he does* (cf. aðú·m *he does*); the prefix ʔack-, as in ʔacku·vá·k *he stays about, in various places* (cf. u·vá·k *he is present*), is composed of a pseudo-thematic element ʔac- *things* plus the locative case suffix -k. Similarly the adhering prefix wanʸm- (as in wanʸmayá·k *he enjoys*) contains a pseudo-thematic element wa- (poss. < i·wá· *heart*) plus a demonstrative suffix -nʸ plus the ablative case suffix -m.

23. Theme formation. In regard to the processes employed and the relationship between the component parts, complex non-thematic elements follow the same patterns of formation as words (more particularly nouns). The mechanics of theme-formation differs from the mechanics of word-formation in both these respects.

The processes employed in the formation of themes and in modification of the theme for grammatical purposes are affixation (prefixation, infixation, suffixation), reduplication, vocalic ablaut, and composition. The association between the component parts of the theme is much firmer than that between a theme and non-thematic elements in that both the structure and the meaning of the theme are altered by the grammatical processes mentioned. Affixes which have this effect on the theme will be called thematic affixes to distinguish them from non-thematic elements.

Affixation is more characteristically employed with the verb theme than with the noun theme. The verb theme may consist of a single unanalyzable morpheme (a stem) or of a stem plus one or more affixes. Affixes are employed both in the formation of the theme and in the modification of the theme for grammatical purposes, for example conjugation for the plural and the formation of verbal abstracts. The scope of the process is indicated by the following series of forms: *aðáp *to be split* is a verb theme consisting of a stem alone; from it is derived, by prefixation of the thematic prefix t-, the theme *taðáp (*t-aðáp) *to split (wood);* the gerund of ʔaðáp is tu·ðáp (*t-a<u·>ðáp) *(his) splitting;* the distributive plural form of *taðáp is *tatu·ðá·p (*t-a<t><u·>ðá·p-p) *many split.*

Affixes are employed with the noun theme chiefly in the formation of derived verb themes; thus, the verb theme *nʸu·tí·šv *to be equipped with a bow* is composed of the noun theme *ʔu·tí·š *bow* plus the thematic affix-complex nʸ-. . . -v.

Infixation is not used with noun themes proper (i.e., noun themes not derived from verb themes) but only with verb themes. Some infixes occupy a position immediately preceding the first consonant of the stem, others a position immediately preceding the consonant which precedes the accented vowel of the stem. With stems of the types vcv́ and vccv́, both types of infixes are included within the stem: *tatu·sú·lʸ (*t-a<t><u·>sú·lʸ·, stem *asúlʸ) *many gouge,* *cacxu·táṭv (*c-a<c>x<u·>táṭ-v; stem *axtá·ṭ) *many crawl.* With stems of the type v́ both types of infix precede the stem: ya-*šatu·wálʸv (ya-*š-<t><u·>á·lʸ-v; stem *á·lʸ) *many crave.* With stems of the type cvcv́, infixes of the first type precede the stem while infixes of the second type are included within it: *šatku·ví·rv (*š-<t>ka<u·>ví·r -v; stem *kavér) *many overcome.*

Reduplication is employed as a theme-forming process, but not for the grammatical modification of the theme. Two types of reduplication are found, both involving complete reduplication of the stem. In the first type, found in both noun and verb themes, the stem is reduplicated in de-accented form and, under the appropriate conditions,[2] with the loss of the initial vowel: toxatóx (< stem *atóx) *to be spotted*, xʷecaxʷéc (< stem *axʷéc?) *oriole*, ʔayaʔáy (< stem *aʔáy?) *exclamation of impatience*, axlakaxlák (< stem *axlák) *to be intertwined*, axnaraxnár (< stem *axnár?) *turtle*. In the second type, found only in noun themes, the stem is simply repeated in accented form, so that the result resembles a nominal phrase: xál xál *wagtail* (*bird sp.*). The treatment of such forms is analogous to that of single nouns rather than that of nominal phrases. Pronominal prefixes precede and case suffixes follow the theme as a whole rather than both being attached to the second member of the phrase: ma·xál xáləc (ma·- + xál xál + -c) *you wagtail* as compared with paʔi·pá· ma·kʷatáynʸa (paʔi·pá· *people* ma·- + kʷaʔatáy + -nʸ + -a *you-the-many-there*) *you many people*.

Vocalic ablaut is employed alone or together with other grammatical processes chiefly for grammatical modification of the theme, less often as a theme-forming process. A tabular presentation of types vocalic ablaut has already been given.[3]

Vocalic ablaut is employed most frequently in modification of the verb theme. Its use with the noun theme is confined to the formation of derived verb themes.

Composition is employed only in the formation of the noun theme. The verb theme never contains more than one stem; the noun theme may be composed of two stem elements. Some of these are modified forms of stems which occur as noun themes themselves: ðo-šu·nʸá· *eye-lash* (cf. i·ðó *eye*), ʔavu·tó *center of the house* (cf. ʔavá *house*, ató *center*). Others cannot be derived from independent noun themes, nor can a definite meaning be ascribed to them in all cases: e.g., i·- is an unetymologizable element found in many body-part terms, e.g., i·ðó *eye*, i·yá· *mouth*, i·mé *foot;* šalʸ- is an unetymologizable element to which no meaning can be ascribed, e.g., šalʸ-ʔáy *sand*, šalʸ-mák *back*.

24. General remarks concerning the noun. The noun may consist of a theme alone or of a theme plus affixed non-thematic elements. These non-thematic elements are of four types: pronominal prefixes; demonstrative suffixes; the locative suffix -i; case suffixes. No two affixes of the same type may co-occur in the same word. Pronominal prefixes and the locative suffix -i do not co-occur in the same word. Table 1 gives the relative positions occupied by the several elements of the noun form.

25. Noun theme. Three types of noun theme[4] are found:

Simple noun themes consist of a single unanalyzable stem element: ʔaxá *water*, takšé *gopher*. The majority of noun themes are of this type.

Reduplicated noun themes consist of a single stem element repeated, with or without loss of accent.[5] The following reduplicated themes with retained accent are found: pác pác *small long-legged bird sp.*, šák šák *brown hawk sp.*, ţáw ţáw *swamp kingbird*, xál xál *wagtail* (*bird sp.*), ʔóq ʔóq *seagull* (?), xás xás *weed sp.* The following reduplicated themes with lost accent were found. It will be noted that there are variations within the class: xʷecaxʷéc *oriole*, axnaraxnár *turtle*, xʷari·xʷár *large green grasshopper*, vervér *twig*, nexní·x *humming bird;* cf. also: kʷawatpawátp *lace-wing mosquito*, kʷa·cmanamán *bobcat*.

Compound noun themes consist of two stem elements, some of which are etymolo-

[2] See **13a**.

[3] See **15**.

[4] That is, noun themes proper, or those which are not derived from verb themes.

[5] See **23**.

gizable while others are not. The elements which are found in compound noun themes may be classified as first-position elements and second-position elements. The following are frequently found.

First-position elements:

i- (used in body-part terms): i·ðó *eye*, i·ðó· *tooth*, i·kʷé *horn*, i·má·ţ *body*, i·mé *foot*, i·šá·lʸ *hand*, i·tó *belly* (cf. ató *center*), i·wá· *heart*, i·yá· *mouth*, i·ʔé *hair*, i·mís *fur*, i·wéy *rectum*, i·pálʸ *tongue*, i·xú· *nose*.

cam-: camʔaðúlʸ *ant*, camʔi·tó *melon* (poss. cf. i·tó *belly*), camʔu·kʷílʸ *wild peas*.

malʸ-: malʸka·pílʸ *dragon fly sp.*, malʸka·téš *gnat*, malʸxʷék *bird sp.*, malʸtáţ *barrel cactus*, malʸʔú·v *wild tobacco*, malʸxó *pipe*, malʸpú· *umbilical cord*, malʸaqé *throat*.

kam: kamcú·ləq *green berry sp.*, kamnálʸ *boulder*, kamtó·šq *swallow*, kamtér *edible plant sp.*, kamʔu·tá *dipper*.

šalʸ: šalʸmák *back*, šalʸʔáy *sand*.

wey- (poss. cf. i·wéy *rectum*): weyma·xá·v *centipede*, weymu·ší·r *plant sp.*, weyxamú· *buttocks*.

xalʸ-: xalʸará·v *mesa*, xalʸtóţ *spider*, xalʸʔá *moon*, xalʸʔasmó *fly*, xalʸʔáw *cottontail rabbit*.

TABLE 1

Pron. Pref.	Theme	Dem. Suf	Loc. -i	Case Suf.	Word and Meaning
ʔanʸ- *I, we*	camʔaðúlʸ *ant*			-c *nominative*	ʔanʸcamʔaðúlʸc *we ants*
	ʔa·vé *snake*	-va *this*		-c *nominative*	ʔa·vévəc *this snake*
m- *your*	i·ðó *eye*	-nʸ *that*		-c *nominative*	mi·ðónʸc *your eye*
	ʔamáy *above, sky*	-sa *that*	-i	-lʸ *allative*	ʔamáysilʸ *into the sky*
	vaðá *this one*		-i		vaðí *here*

ðo- (cf. i·ðó *eye*): ðokʷala·ʔú·k *eyebrow*, ðokʷalʸʔi·mé *forehead*, ðokʷaʔór *eye orbit*, ðošu·nʸá· *eyelash*.

kʷ-: kʷakxó· *woodpecker sp.*, kʷalʸtésk *robin*, kʷampánʸq *bat*, kʷantapalʸíc *red humming-bird*, kʷanxó *basket*, kʷapéţ *land turtle*, kʷaqó *fox sp.*, kʷarmu·kó *glowworm*, kʷastamxáy *small lizard sp.*, kʷašʔól *large hawk sp.*, kʷaxʔó· *ashes*, kʷa·rá·w *plant of cane sp.*, kʷa·rí·š *lizard sp.*, kʷa·sawík *small owl sp.*, kʷa·štamʔu·kínʸk *woodrat*, kʷa·tú·lʸ *lizard sp.*

kʷa·c-: kʷa·cmanamán *bobcat*, kʷa·cnʸi·ʔá·lʸk *red racer snake*, kʷa·cxamu·nʸó· *tarantula*, kʷa·cʔu·ðú·r *Bermuda grass*, kʷa·cka·ʔi·ðú·lʸ *barren desert*, kʷa·cnʸa·xʷá·ţ *red-backed locust* (poss. cf. *ʔaxʷéţ *red*), kʷa·cnʸa·ʔi·lʸ *black-backed locust* (poss. cf. *nʸi·lʸ *black*).

xalʸk-: xalʸkʔa·tém *small water spider*, xalʸkʔa·mpáţk *grasshopper sp.*

xam-: xamasnán *small insect sp.*, xamkʸé *swallow*, xamsárək *sandbar*, xamsúlʸ *chameleon*, xamʔa·ví·r *water snake*, xamʔúlʸ *ashes*, xamʔu·kʷír *beetle sp.*, xamʔu·kʸé *pestle* (poss. cf. kʷasʔu·kʸé *pottery paddle*), xamʔu·cé *muller, mano*, xamayéł *digging stick*.

xan-: xanamó· *duck*, xanavcí·p *wren*, xanavʔéq *body lice*, xanavsú·ţ *shredded inner willow bark*, xantasʔílʸ *lizard*, xantavʔílʸ *edible plant sp.*, xanʔa·vá· *locust*, xanʔa·vlʸép *butterfly*, xanʔa·vré· *dragonfly*.

xanʸk-: xanʸka·wá·lək *tadpole*, xanʸkʔí·lʸk *tooth-boring worm*, xanʸkʔó *bull frog*; compare also: xanʸmu·lól *cricket*.

ya·- (cf. i·yá· *mouth*): ya·vu·mé *beard*, ya·xaʔáw *jawbone*, ya·xu·pó· *side of thorax, ribs*.

ʔavu·- (cf. ʔavá *house*): ʔavu·cúlʸ *smoke hole*, ʔavu·lʸpó *house-post*, ʔavu·mák *back of house* (cf. amák *behind*), ʔavu·spó *abandoned home*, ʔavu·tó *center of house*, ʔavu·yá· *door* (cf. i·yá· *mouth*).

ʔi·- (cf. ʔaʔi· *wood, tree*): ʔi·ðó· *willow*, ʔi·ðú·ţ *wild turnip*, ʔi·sáv *arrow-weed*, ʔi·šíw *brush sp.*, ʔi·tú·ţ *sage brush sp.*, ʔi·xór *wild plant sp.*, ʔi·kamaðí· *ocotillo cactus*, ʔi·yá· *mesquite bean*, ʔi·ðílʸ *inner bark*.

Second-position elements (listed here are a few second-position elements which occur in more than one theme; a large number of others can of course be extracted from themes containing isolable first-position elements):

-mák (cf. amák *behind*): šalʸmák *back*, ʔavu·mák *back of house*.

-táţ (connotes *spiny*): ʔatáţ *thorn*, malʸtáţ *barrel cactus*, axtáţ *backbone, back*, ʔu·táţ *spear*.

-tóţ: ʔaxtóţ *red-berry bush*, xalʸtóţ *spider*.

-póţ (cf. verb stem *apóţ *to be scattered* > *k-apóţ *to scatter with the foot*): ʔampóţ *dust*, xalʸpóţ *Dispersal* (clan name).

26. Plural noun theme. The noun theme generally may have either a singular or a plural significance: ʔi·ðó· *my tooth* or *my teeth*, maxʷá· *badger* or *badgers*. A suffix -c is added to the theme when respective possession is indicated or when the members of a group are referred to severally: ʔi·ðó·ca *our* (*respective*) *teeth* (vocative), ma·maxʷá·ca *you* (*who are*) *badgers* (vocative).

The themes ʔavá *house* and ʔaxáţ *horse* form the irregular plurals *-ca ʔavá·ca and *-cxá·ţ. These, however, occur only with possessive pronominal prefixes: ʔanʸca ʔavá·ca *our* (*respective*) *houses*, ʔanʸcxá·ţ *my* (*several?*) *horses*. The theme kʷa·nák *hollow, dip* (*in ground*) forms a plural kʷa·cnák *hollows*.

Certain noun themes take as plurals the plural forms of verb themes derived from themselves. The noun theme kʷasʔi·ðé· *doctor* takes the plural kʷasʔi·tðíc *doctors*, literally (*those*) *who are doctors*, which is the plural form of the verb theme *kʷasʔi·ðí· *to be a doctor*, which in turn is derived from kʷasʔi·ðé· by ablaut of the accented vowel plus suffixation of attributive -y.[6] Similarly aclʸác *female cross-cousins*, literally (*those whom*) *he calls female cross-cousin*, the distributive object form of the verb theme *alʸáy *to call someone female cross-cousin*, serves as the plural of the noun theme alʸá· *female cross-cousin* from which the verb theme *alʸáy is derived. The occurrence of plurals of this type is to be regarded as an instance of the formation of verbal abstracts[7] rather than as a regular type of modification of the noun theme.

27. Pronominal prefixes. Pronominal prefixes indicate person (first, second, third, and indefinite third persons) but not number. There are two sets of possessive prefixes. Forms of the first set are ʔ-, m-, zero-, kʷ-, as for example: ʔi·yá· *my mouth*, mi·yá· *your mouth*, i·yá· *his mouth*, kʷi·yá· *someone's mouth*. Forms of the second set are ʔanʸ-, manʸ-, nʸ-, kʷanʸ-, as for example: ʔanʸxáţ *my horse*, manʸxáţ *your horse*, nʸaxáţ *his horse*, kʷanʸxáţ *someone's horse*. The first set is used chiefly with body-part and kinship terms, the second chiefly with natural objects, artifacts, and some body-part terms. The distinction, however, is not quite identical with that between inalienable and alienable possession: i·kʷé (< zero- + i·kʷé *horn*) *his horn* may refer to a deer's horn or to a deer horn owned by a person.

A certain number of themes, most of which have ʔ- as an initial consonant, have a possessed form which differs from the absolute form: ʔakmé *bag* > ʔanʸkamé *my bag*, ʔaktálʸk *wild onion* > ʔanʸkatálʸk *my wild onion*, ʔakʔúlʸ *jackrabbit* > ʔanʸkaʔúlʸ *my jackrabbit*, ʔavu·lʸpó *house-post* > ʔanʸvu·lʸpó *my house-post*, ʔavu·spó *abandoned home* > ʔanʸvu·sapó *my abandoned home*, ʔavu·tó *center of house* > ʔanʸvu·tó *center of my house*, ʔaxmá *tepary bean* > ʔanʸxamá *my tepary*

[6] See **15.**

[7] See **65.**

beans, ʔaxmó *mortar* > ʔanʸxamó *my mortar*, ʔaxná·lʸ *gourd* > ʔanʸxaná·lʸ *my gourd*, ʔaxtóṭ *red-berry bush* > ʔanʸxatóṭ *my red-berry bush*, tašᵏén *cookpot* > ʔanʸtašakʸén *my cook-pot*.

In some cases the change in the possessed form is optional: ʔamáṭ *land* > ʔanʸmáṭ or ʔanʸʔamáṭ *my land*, ʔaxmát *pumpkin* > ʔanʸxamát or ʔanʸʔaxmát *my pumpkin*, ʔu·tí·š *bow* > ʔanʸu·tí·š or ʔanʸʔu·tí·š *my bow*, ʔaʔú·v *tobacco* > ʔanʸʔú·v or ʔanʸʔaʔú·v *my tobacco*.

A few themes occur only with possessive prefixes: *-u·ʔá·lʸ in nʸu·ʔá·lʸ *his clothes*, *-cʔakʷélʸ in nʸacʔakʷélʸ *his skin* (cf. ʔakʷélʸ *hide, leather*), *-i·xʷéṭ in nʸi·xʷéṭ *his blood*, *-kaparó· in nʸakparó· *his rib*, etc. Obligatory possession appears to be confined to body-part terms which take the second set of possessive pronominal prefixes.

Referential pronominal prefixes are ʔanʸ- for the first person, ma·- (shortened to ma- before a glottal stop) for the second person: paʔi·pá· *person, people* > ʔanʸpaʔi·pá· *I (who am a) person, we people*, ma·paʔi·pá· *you (who are a) person, you people*.

28. Demonstrative suffixes. The demonstrative suffixes are -va *this (nearby)*, -sa *that (far off)*, and -nʸ *that (location unspecified)*.

29. Locative -i. The locative suffix -i, whose meaning is approximately that of English *at*, or *the vicinity of* is usually affixed to the noun theme plus demonstrative suffix: ʔavu·máknʸi (< ʔavu·mák *back of house* + -nʸ *that* + -i *at*) *at the back of the house*, i·mé šamá·vi (< i·mé *foot*, šamá· *root* + -va *this* + -i *at*) *at his feet, underfoot*, literally, *at the root of his foot*. Noun themes of demonstrative meaning may take the locative suffix -i directly, without an intervening demonstrative suffix: vaðí (< vaðá *this* + -i *at*) *here*.

30. Case suffixes. The noun theme may occur in the absolute case or with a case suffix. In the absolute case, the theme is used as the object of a verb, as the possessor of a following noun, or as the first member of a nominal phrase: xatalwé kaná·vək *he tells about coyote*, literally *coyote he-tells-of*, xatalwé nʸaʔú·v *coyote's tobacco* (*plant name*), lit. *coyote his-tobacco*, xatalwé šalʸʔáy *sand coyote*, literally *coyote sand*. The theme with case suffixes functions as subject of a verb, as an adverb, or (with vocative -a) as a predicative expression: šalʸʔáyc ʔamé·k *the sand is high*, literally *sand it-is-high*, šalʸʔáyəm aðí·k *he came through the sand*, literally *sand-through he-came*, šalʸʔáya *sand!*

The case suffixes are: -c nominative, -k locative (*at, from*), -lʸ allative (*into*), -m ablative (*through, by means of*), -a vocative.

All case suffixes may be added directly to the theme or to the theme plus demonstrative suffix. The theme plus locative -i may occur without other suffixes, with a locative, allative, or ablative case-suffix, but not with a nominative or vocative case suffix. Table 2 gives combinations of suffixes which may occur with the theme (-nʸ *that* being given as representative of the demonstrative suffixes).

TABLE 2

	Case Alone	Demonstrative Plus Case	Locative -i Plus Case[8]	Demonstrative Plus Locative -i Plus Case
Absolute	zero	-nʸ	-i	-nʸi
Nominative	-c	-nʸc		
Locative	-k	-nʸk	-ik	-nʸik
Allative	-lʸ	-nʸəlʸ	-ilʸ	-nʸilʸ
Ablative	-m	-nʸəm	-im	-nʸim
Vocative	-a	-nʸa		

Themes with the plural suffix -ca occur in the absolute case, with the nominative suffix and with the vocative suffix, but never with demonstrative suffixes, locative -i, or other case suffixes.

31. Demonstratives, pronouns, and adverbs. Demonstratives, pronouns, and adverbs do not constitute a distinct form-class, but are merely noun themes of somewhat

[8] Occur only with certain demonstrative noun themes. See **31.**

special meaning and with a less free treatment than ordinary noun themes. They take no pronominal prefixes, and are limited in respect to the suffixes which they may take. The demonstrative themes are: vaðá- *this (nearby)*, avá- *this (a short distance away)*, savá- *that (far away)*, makʸé- *who? anyone?* makʸíp *which one? some one?*, nʸá·- *that.*

TABLE 3

	Case Alone	Demonstrative Plus Case	Locative -i Plus Case	Demonstrative Plus Locative -i Plus Case
Absolute		vaðánʸ	vaðí	
Nominative	vaðác			
Locative			vaðík	
Allative			vaðilʸ	
Ablative	vaðám		vaðím	
Vocative				

TABLE 4

	Case Alone	Demonstrative Plus Case	Locative -i Plus Case	Demonstrative Plus Locative -i Case
Absolute		nʸá·nʸ		nʸá·nʸi
Nominative		nʸá·nʸc		
Locative				nʸá·nʸik
Allative				nʸá·nʸilʸ
Ablative		nʸá·nʸəm		nʸá·nʸim
Vocative		nʸá·nʸa		

The first four (vaðá-, avá-, savá-, and makʸé-) do not occur in the absolute case except with the demonstrative suffix -nʸ, but do not take demonstrative suffixes together with any other suffixes, and they take locative -k and allative -lʸ only together with locative -i. Table 3, using the theme vaðá- as an example, indicates the suffix combinations with which these four themes may occur.

The theme makʸíp occurs in the absolute case and with nominative (makʸípəc), ablative (makʸípəm), and vocative (makʸípa) case suffixes, but does not take demonstrative suffixes or the locative suffix -i.

The theme nʸá·- occurs only with demonstrative suffixes: nʸá·va *that one here*, nʸá·sa *that one there*, nʸá·nʸ *that one* (location unspecified). Table 4 gives the forms of nʸá·- with demonstrative suffix -nʸ.

The pronominal themes do not take demonstrative suffixes or the locative suffix -i, but are modified for the plural. Since they are somewhat irregular, all the forms are given here, in table 5.

Adverbial themes (themes of time and place reference) do not take pronominal prefixes and are not modified for the plural. Otherwise they are treated as normal noun themes. Some typical adverbial themes are amák (*the*) *behind*, maṭʔár (*the*) *outside*, maxák (*the*) *underneath*, ʔaxkʸé (*the*) *across*, ʔamáy (*the*) *above*, matxá (*the*) *north*, kavé· (*the*) *south.*

TABLE 5

	1st Pers. Sing.	1st Pers. Plu.	2d Pers. Sing.	2d Pers. Plu.
Absolute	ʔanʸép, ʔanʸá·p	ʔanʸé	má·nʸ[9]	
Nominative	ʔanʸá·c	ʔanʸécəc	má·nʸc	mácəc
Locative				
Allative				
Ablative	ʔanʸépəm		má·nʸəm	
Vocative	ʔanʸépa	ʔanʸéca	má·nʸa	máca

[9] má· + demonstrative -nʸ.

32. Derivation of verb themes from noun themes. Verb themes are formed from noun themes in several ways.

32.1. From noun themes ending in an accented vowel, by suffixation of attributive -y with or without concurrent ablaut of the accented vowel.

Without ablaut: ʔasá *fog* > *ʔasáy *to be foggy*, ʔaxá *water* > *ʔaxáy *to be damp*,

ʔakʷi·šá *shade* > *ʔakʷi·šáy *to be shady*, ʔanʸá· *sun* > *ʔanʸá·y *to be bright, light*, ʔací· *fish* > *ʔací· (= ʔací·y?) *to be a fish*, ʔaví· *stone* > *ʔaví· (= ʔaví·y?) *to be rocky*.

With ablaut: alʸá· *female cross-cousin* > *alʸáy *to call someone female cross-cousin*, ʔaxʷé *enemy* > *ʔaxʷá·y *to be hostile*, ʔakʷé *cloud* > *ʔakʷí· (= ʔakʷí·y?) *to be cloudy*, malʸaqé *throat, voice* > *malʸaqí· (=malʸaqí·y?) *to mourn in throaty tone*, kʷasʔi·ðé· *doctor* > *kʷasʔi·ðí· (= kʷasʔi·ðí·y?) *to be, become a doctor*, ʔamó *sheep* > *ʔamúy *to be downy* (e.g., *blanket*), nʸakó *father* > *nʸakúy *to call someone father*, takaró *hook-ended object* > *takarúy *to be hook-ended*, i·ðó *eye* > *i·ðú·y *to have for an eye*, ʔi·ðó· *willow* > *ʔi·ðúy *to be willow-covered*.

With optional ablaut: i·ðó· *tooth* > *i·ðó·y/i·ðú·y *to have for a tooth*.

If the accented vowel is immediately preceded by a consonant cluster, a vowel <a> may be intercalated between the two consonants of the cluster.

Without ablaut: matxá *wind* > *mataxáy *to be windy, wind blows*, ʔaxmá *tepary bean* > *ʔaxamáy *to be suitable for the cultivation of tepary beans*, anʔó· *older sister's child* (*w.s.*) > *anaʔó·y *to call someone older sister's child* (*w.s.*), axkó· *daughter's child* > *axakó·y *to call someone daughter's child*.

With ablaut: ʔaxʔá· *cottonwood* > *ʔaxaʔáy *to be cottonwood-covered*, masʔé· *mud* > *masaʔí· (= masaʔí·y?) *to be muddy*, ʔaxmó *mortar* > *ʔaxamú·y *to be mortar-shaped*, kʷaxʔó· *ashes* > *kʷaxaʔú·y *to be ashy*.

But compare: ʔalʸxá *transvestite* > *ʔalʸxáy *to be, become a transvestite, to be timid, cowardly*, xalʸʔá *moon* > *xalʸʔáy *to be moonlit*.

32.2. From noun themes ending in a consonant and having the accented vowel preceded by a consonant cluster, by insertion of <a> between the two members of the cluster: kamnálʸ *boulder* > *kamanálʸ *to be stony, heavy as stone*, šalʸʔáy *sand* > *šalʸaʔáy *to be sandy*, ʔampóṭ *dust* > *ʔamapóṭ *to be dusty*, ancén *older brother* > *nacén *to call someone older brother*, asʔáw *woman's child* > *saʔáw *to call someone child* (*w.s.*) (cf. also *saʔáwv *to give birth to*), antáy *mother* > *natáy *to treat with filial devotion*.

32.3. By a further process of suffixation of -v *to be possessed of* (?) to an attributive verb theme: i·ðó· *tooth* > *i·ðó·yv *to have teeth*, maṭkʷi·šá *shadow* > *maṭkʷi·šá·yv *to be wonderful, excellent*, ʔaxʷé *enemy* > *ʔaxʷá·yv *to be at war with*, ya·vu·mé *beard* > *ya·vu·mí·v (= ya·vu·mí·yv?) *to be bearded*.

Compare also: i·mé *foot* > nʸi·-*i·mí·v (= nʸi·-*i·mí·yv?) *to leave tracks*, i·kʷé *horn* > *kʷi·kʷá·yv/kʷi·kʷí·v *to have horns*, i·tó *belly* or ató *center* > *atúyv *to be pregnant* (cf. also *ató· *to be sated*).

32.4. By prefixation of nʸ- (3d pers. possessive pronominal prefix) and suffixation of -v *to be possessed of* (?) to a noun theme: ku·péṭ *quiver* > *nʸaku·péṭv *to be equipped with a quiver*, ʔu·tí·š *bow* > *nʸu·tí·šv/nʸaʔu·tí·šv *to be equipped with a bow*, *-u·ʔá·lʸ[10] *clothes* > *nʸu·ʔá·lʸv *to dress, to be clothed*, *-i·xʷéṭ[11] *blood* > *nʸi·xʷéṭv *to bleed*, xu·már *child* > *nʸaxu·márv *to have a child, to be a father* (cf. also verb theme *xu·már *to be young*).

Compare also: ʔu·tú·r *pole for hoop-and-pole game* > *u·tú·rv *to play hoop-and-pole game*.

32.5. Irregular, but resembling in some respects the cases cited above, are: ʔasʔí· *salt* > *ʔasaʔílʸ *to be salty*, ʔu·nʸé *road* > *nʸaʔu·nʸá·y *to take one's way*, xalʸʔáʷ *cottontail rabbit* > *nʸaxalʸʔáw *to call someone father-in-law*, ʔavá *house* > *nʸaváy *to inhabit*.

32.6. Verb themes of the above types with adhering prefix alʸ- have the meaning *to turn into . . . , to become . . .* : ʔaví· *rock* > alʸ-*ʔaví· *to turn to stone*, kamnálʸ *boulder* > alʸ- *kamanálʸ *to become heavy as stone*, šamá· *root* > alʸ-*šamáyv *to take root* (= *to become possessed of a root?*), ʔamó *sheep* > alʸ-*ʔamúy *to turn into a sheep*.

Compare also: ʔamó·y *palm tree* > alʸ-*ʔamó·y *to turn into a palm tree*.

[10] See **27**.

[11] Ibid.

LOAN WORDS IN DOMINICA ISLAND CARIB

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1. Introduction
2. Loan words, past and present
3. Accommodation and assimilation
4. Conclusion

1. Fred Ober in his Camps in the Caribbees records his chagrin on discovering that what he at first had taken to be the native Carib name for the armadillo or tatou, "haginamah," was in reality no more than the local pronunciation of hog-in-armour. Such discoveries must be familiar to all linguistic field workers. But even when the origin of a word is easily recognizable, its use—like that of other borrowed traits—may be very different from that to which we are accustomed. West Indies English: hanbɔg < *humbug*, meaning *to pester* or *to quibble*, and bada < *bother*, meaning *to take trouble* or *to pay attention* are fairly simple; but it takes some time to become used to the idea that a motor-launch may puncture (i.e. *have a break down*), that a waiter is a *tray* and not the person who carries it, and that a keeper is a man's *mistress*, while his mistress means his *wife*.

Sometimes instead of evolving, words have remained semantically stationary. Thus, in the West Indies parlance one perfumes (i.e. *smoke dries*) meat and not one's person; while the negro who warned me not to walk barefoot as the rocks on the beach were very pungent would have been justified in resenting my smile. But on the whole, West Indians have taken their words as they found them, and adapted them to their own concepts and way of speech.

2. In attempting to record the scant native vocabulary remembered by the present-day Dominica Carib, I found that a number of the words given to me as Carib were corruptions of Spanish: akúša *needle* < aguja; ąkəlítsi *English man, white man* < Inglés *Englishman*; bàkasú *cow, ox* < vacazo ? > vaca *cow*; bínu *rum, wine* < vino *wine*; bwĩrəxu ~ bwíroku *pig* < puerco; kàbará *goat* < cabra; kàbayú *horse* < caballo; karatǫ́i ~ karatóni *rat* < ratón *mouse*; kayú *hen, cock* < gallo *cock*; kùsiyǫ́ *knife* < cuchillo; mékɛru *negro* < ? negro; mésu *cat* < micho *puss*; pulátu *dish, bowl* < plato; pútu *pot, jug* < pote; sálu *salt* < sal; or of French: BÉru *glass* (*tumbler*) < verre; sapote *hat* < chapeau; sìmisí *shirt* < chemise; saùterú *cauldron, iron cook pot* < chaudière; tàsú *cup* (*porcelain*) < tasse. From English come late Carib: kápa *half penny* < copper (coin), and páypa *tobacco-pipe* < pipe, while ànąsí *spider*, comes from West African Chi, anansi. To this list may be appended: bíra *a sail*, (cf. Spanish vela); bé^{y}a ~ béya *a bay, inlet* or *harbour* (cf. Spanish bahia); kábanə *hammock, bedding* (cf. Spanish cama; French cabane); mútu *a person* (cf. West African Basa: mud homo; French monde), which, while they refer to indiginous traits and may well themselves be native (the Carib islanders were one of two tribes on the Atlantic seaboard reported to have known the sail in pre-Columbian days), appear at least suspect. Breton has the first two as given, and the others as: ikábanų *settlement, homestead, camp;* and -muku *doer, person* (in compounds only).

I later found that all of the above Spanish loans, with the exceptions of pulátu and putu and with the addition of many others, had been recorded in the first half of the seventeenth century by Breton. Unfortunately this usually painstaking author fails to indicate their foreign origin for the most part; although he expressly warns us in the preface to his dictionary that such words

(given as Carib by Rochefort or de Poincy) as: "banaré, manigat, carebet, aioupa, amac, coüi, mouchache, cacone, coincoin, maron, piknine, boucan, Tortille, pisquet, and canari, are not Carib at all." (That some of these latter are at least corruptions of Carib terms is shown by Breton's own: "baouánale, táboui, canálli," and by the fact—amply illustrated in his lexicon—that l and r, t and k, etc. were often confused or interchanged by the Carib themselves. Obvious loan-words listed as Carib by Breton, but now forgotten, include (from Spanish): árka *coffer* < arca; alóɒler *pin* < alfiler; ąšwélu *wire* < anzuelo *fish-hook;* báila *violin* or other *stringed instrument,* (cf. viola *a viol;* baile *a dance*); báina *a comb of European type* < peine; bal·átan·a *plantain* (large variety) < plátano; bérəlese *beads* (imported glass) < perlas; bine *vine* < viña or < viñedo *vineyard;* bonétī *hat* < bonete *bonnet, cap;* búrbrī *gun-powder* < pólvora; buláta *silver* < plata; butéiša *pitcher* (Spanish type) < botija; butéyo *bottle, glass* < botella; búyani *poniard, dagger* < puñal; érei *king* (European) < el rey; iéru *steel* < hierro *iron;* kárta *letter, book, paper* < carta; kalhón *cannon* < cañon; kamiša *cloth, clothing, shirt* < camisa *shirt;* kanabíre *ship* (European) < caravela; kirísianī *christian, white man, thief* < cristiano; kirístil·e *crystal* < cristal; krábu *nail, iron* < clavo; pánī (*wheaten*) *bread* < pan; pántir *banner, flag* < bandera; palma *coconut tree* < palma *palm;* pip·a *hogshead, cask, barrel* < pipa; ᴘlamíŋgī *Dutch* < flamenco *Flemish, Fleming;* rakabúšu *musket, gun* < arcabúz; sabát·o *shoes* < zapato; sákao *sand, gravel* < ? cascajo *gravel;* šérpa *billhook, European steel machete* < serpa; siér·a *saw* < sierra; and (apparently from French): kánaru *musk duck* < canard; kanísī *sugar-cane* < canne à sucre; mutǫ *sheep* < mouton; pehę *pine-wood* < pin; šúkrī *sugar* < sucre; ᴘrąsī *French* < français. Doubtful, and possibly native are: bargánda *knee of a boat* (cf. Spanish barca *boat,* gandujar *to bend*); mąšálaka *rabbit* (cf. Spanish mascar *to chew*); réšik *coal-pot, brazier* (cf. French réchaud, with same meaning, or Spanish rejilla *grate,* reseco *very dry*); sihʷíya *Spanish* (cf. Spanish Castilla *Castile*).

3. Borrowed words were assimilated to and took the same affixes as Carib: nisabátoni *my shoes;* lišérpate *his machete;* rubay ipáypate *give* [*it*] *my pipe!* Breton gives no borrowed verbs, but later Carib undoubtedly used several such as: mariétina *I* (*have* or *am*) *married* > French marier; šagrinépabaná *do not annoy me!* > French chagriner. Religious terminology given by Breton is omitted from the above list since, as there were no converts, it must have been highly artificial.

But although Caribs borrowed freely in naming many new culture traits, they did not always do so. Sometimes they assimilated the new to an already familiar object (thus *lamp* to *torch, pump* to half calabash used for *bailing* water from canoe); and more often they invented terms descriptive of the novelty's purpose or activity or shape (thus for mirror, weighing scales, spectacles, bell, wheel, penknife, carpenter's plane, hammar, file). Eggs were called *henfruit,* butter or milk *cow-juice.* In some cases a native and a borrowed term subsisted side by side. The presumably borrowed term (although I can find no analogy for the change of initial consonant), mékeru *negro* of the women's tongue has an apparently native: tibúlue, as its counterpart in the men's language. So likewise: kánaru *duck* W. S. versus lúbue *duck* M.S.; kayu *hen* W. S. versus alírą *hen* M.S. Distinction between native and foreign type objects is shown in M.S.: kʷámai, W.S.: buléra, versus báina, all denoting *a comb.* Besides the European kùsiyǫ *knife,* šerpa *billhook,* the Caribs continued to employ: lešúragle *penknife* (> lešura *to slash* or *cut lengthwise*); kaburánī, and (ne)lesúbara(te) *sword-club,* (*my*) *sword-club* or *chopper;* and it is the latter term

which is remembered today as meaning *cutlas* (*machete*).

As regards the phonetic accommodation of the borrowed words, several points are worth noticing: (1) Except as the first term in a compound (e.g. išík-tᵉahĭ, lit. *head-cover*, an alternative word for *hat*), Carib or Carib-ized words must end in a vowel (which may be nasalized), a nasal (n or m), or a liquid (l or r). (2) Consonantal clusters are, with few exceptions, broken up by simplification, metathesis, or by interpolation of vowels (this also occurs not infrequently in Creole; e.g. ǫbilie *forget* < French oublier; kʷaš < [and meaning] English *squash*). (3) The liquids are often confused; (although the emerging tendency was, it appears to me, in the direction: n > l > r. With this trend compare Creole: kolɔm *estate-manager* < French économe; grịse *to slip* < French glisser; lɔman *Norman* [English name]; krifɔd *Clifford* [English name]). (4) There is a marked tendency to unvoicing (the shift p > b can only be explained on the basis of my own observations if the latter phoneme be regarded as a lenis /p/); e.g.: v > f, b > p, d > t, g > k, and z > s; and toward aspiration and/or spirantization: p > pᵉ ~ ᴘ (= ɸ), k > kᵉ ~ x. (The former tendency is also present, though less regular, in Creole: lofɛb *goldsmith* < French l'orfèvre; vakabǫ *vagabond* < French vagabond). Curiously enough, in St. Vincent, and among the Black Carib of Central America who came thence, a trend opposite to that found in Dominica seems to have been at work. The few Carib words I was able to get in that island, as well as those given by Conzemius for the Black Carib, show t > d, k > g, and s > z: (dúna *water*, v. Breton's and my own, túna; nad *mat* < French natte; manda *cloak* < Spanish manta; garífuna *Carib* v Breton's kal·íponą and my own karipúną; rúguma *cassava-press*, v Breton's rukúma; éži *cassava-grater*, v. Breton's, éše and my own: ési; lániži *his heart, mind* etc., v. Breton's: lániši and my: lanisi). The trends l > r and p > ᴘ appear to have existed as in Dominica. (5) The most common vowel changes are: o > u; e > i (more rarely i > e); ə (or any other unstressed vowel) > ĭ; a > ɛ. (These are still frequent in Dominican Creole: lume *to name* < French nommer; mụte *to go up* < French monter; mụtʷe *to show* < French montrer; niše *to lick* < ? French lécher; sĭme *to sow* < French semer; sɛ·kle *to weed* < French sarcler; šɛ·bǫ *charcoal* < French charbon; klɛ·te *light* < French clarté). Stress usually remained unchanged.[1]

4. The above lists of loan-words appear to show, as regards contacts and acculturation, that the Island Carib of early colonial days had more dealings with the Spaniards than is generally believed; and that through them they became and continued to be acquainted with (1) European domestic animals and the rat, (2) iron and steel implements and especially cutting tools and weapons, (3) wine and spirits and ornaments (including dress). Doubtless there are other categories, such as plantains, coconuts, and

[1] A list of some 350 words and phrases, recorded in 1939 by R. P. J.-B. Delawarde in French Guiana, shows some remarkable correspondences with (as well as divergeances from) Island Carib. Loan-words found in this list include: kamala *chambre*, < Sp. camara; tapala *table*, < Sp. tabla; aliñadu *platine* (*manioc-meal griddle*), < Port. harinhador; ɛpi *shirt*, < Fr. habit; tilikio *under-shirt* < Fr. tricot; kɔsu *stockings*, < ? Port. calço; sambellellu *hat*, < Sp. sombrero; sabato *shoes* < Sp. zapato; aˑñalita *ring*, < Sp. anillito; plata *silver*, < Sp. plata; maloto *hammer*, < Fr. marteau; akusa *needle*, < Sp. aguja; watalaka *carafe* (*water-jug*), < ? Eng. water-cooler; kalaši *glass*, < Eng. glass; pelleti *plate*, < Eng. plate; kaleta *paper*, < Sp. carta; wiñu *wine*, < Port. vinho; kawale *horse*, < Port. cavalho; paka *cow*, < Sp. vaca; palitkio *donkey*, < ? Fr. bourricot; pwelugu *pig*, < Sp. puerco; pelo *dog*, < Sp. perro; puši-puši *cat*, < Eng. pussy; allata *rat*, < Sp. rata; kapilikia *goat*, < ? Prov. Fr. cabrit; kabala *sheep* (sic !), < Sp. cabra; alakabosa *gun*, < Sp. arcabúz; pelete *bread*, < ? Eng. bread; peše boko ma *gone fishing*, < Fr. pecher *to fish*.

surprisingly, salt, which the Caribs obtained formerly, not as might be expected from the sea, but from the ashes of certain terrestial Crustacea. However, the three classes given are preponderant.

Caribs are and always were very reluctant to try any new food. Moreover, they did not eat domestic animals, although some were reared as pets. For these reasons, the pigs left by the Spaniards were long unmolested and went wild, their descendants roaming the Dominican woods to this day; while we are told by Breton, du Tertre, Rochefort and others that the Caribs kept cocks for their timekeeping propensities only, and ate neither eggs, butter, nor milk. Whether such non-indigenous beasts as the *peccary* (bakíra), *guinea-pig* (kabuánara), *turkey* (pikáka), *water-hen* (kámulu) and others listed by Breton were brought from the mainland or hunted there by the Island Carib is not clear. However, according to the seventeenth century chroniclers, the Carib ate little flesh but that of fish, crabs and lobsters, game birds, and (*Dasyprocta*) *agouti* (Carib: píkuri)—their favorite meat to this day. It should be noted that the sheep was introduced by the French, and that the now ubiquitous donkey is altogether absent from the list. Even today few Caribs keep any domestic animals apart from a few hens and one or two pigs. In all the Reserve (which has more than 400 inhabitants) there may be about 6 cows and as many donkeys. The survival of the Spanish loan-words for horse, cow, etc. is therefore due, perhaps, to the Caribs' having regarded these animals in the light of menagerie specimens, rather than to any real process of acculturation.

It is quite otherwise with classes (2) and (3). Wire fish-hooks, iron nails and cook-pots, pins and needles and various steel cutting implements must have been eagerly sought after, and have replaced their counterparts in native economy as soon as they became sufficiently plentiful.

The same is probably true of glass beads, trinkets, bright cloth, hats, shoes, and guns (all of which may be classed as ornaments, since white men were in the habit of furbishing up only unusable firearms for such trade, while hats and particularly shoes were, and still are, of prestige value only), as it certainly is of the white man's more potent beverages.

Nevertheless, the Caribs limited their new requirements and retained a large degree of economic independence up to recent times. It seems likely that such commodities as European cooking and eating utensils, household furniture, and clothing (as witness the change from Spanish to French loan-words for cup, glass, hat, shirt) made only sporadic appearances among the Island Carib of early colonial days, and that their current use was taken over from the liberated negroes in the last century. Only in the last few years have the Caribs begun to accept, very gradually, a money economy—a process unfortunately attended by progressive loss of native crafts, qualities, and contentment.

ZOQUE PLACE-NAMES

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1. Introduction
2. Place-names with locative suffixes
3. Place-names without locative suffixes
4. Alphabetical check list

1. The present article is a morphological analysis of the various types of place-names in use today in the Zoque language of Chiapas, Mexico. Except when otherwise noted, the forms given are those of the Copainalá dialect.[1] The list includes the greater part of the names which the author has recorded;[2] there are actually many other names, as practically every brook, ranch, prominence, and point of interest along the trails bears a name which is known by those native to the region.

The list given herein will illustrate the parallelism existing between many Zoque names and their Spanish counterparts, especially where the latter are of Nahuatl origin; an analysis of this phenomenon, however, is a task for the Nahuatlist and is not attempted here.

Zoque place-names are divided into two classes: those occurring with locative suffixes and those which occur without such suffixes. A few forms belong to either class, the use of a locative suffix being optional with them.[3]

2. Place-names with locative suffixes. Six locative suffixes occur with place-names. These suffixes have relational meanings: -mə *at*, -kəsmə *above*, -kəʔmə *below*, -kəsi *on*, -ʔohmo *in, among*, -ʔaŋə *at*.

Except for the suffix -mə, all these occur freely in noun inflection with their respective relational meanings: naskəsmə *above the ground* (nas ~ nahs- *ground*), mesakəʔmə *under the table* (mesa *table*), naskəsi *on the ground*, nahsohmo *in the ground*, təhkaŋə *to*

[1] The symbols here used in transcribing Zoque are those given in Analysis B of my Phonemic Acculturation in Zoque, IJAL 12.92–5 (1946). (Note that in terms of Spanish symbols, c = ts, č = ch, h = j). The phonological processes and noun morphology are treated at greater length in my Notes on Zoque Grammar (mimeographed for the Summer Institute of Linguistics, 1943).

[2] The data on the Zoque language were collected during several field trips which I made from 1940–45 under the auspices of the Summer Institute of Linguistics.

[3] The analyses herein offered are for the most part descriptive; a limited number of comparative etymologies have been introduced where available and pertinent. In a language where little historical data is available and where comparative methods have not as yet been used to reconstruct a parent language, the toponymist is in general forced to choose between making, on the one hand, a purely descriptive analysis of the place-names and, on the other hand, a type of historical speculation which, though of popular interest, is of no scientific value.

Languages whose history is known provide ample illustrations of place-names (as well as other forms) which are derived from older forms which have become obsolete or non-existent or which have undergone subsequent change. Such change may be sufficient to render the historically correct etymology of a given place-name far from obvious from the standpoint of the present-day structure of the language. It may even be such as to relate the place-name structurally to an entirely different form or set of forms, thus rendering the descriptive etymology at variance with the historical facts. For example, a purely descriptive analysis of the place-names in the writer's dialect of English would treat the name Maryland (pronounced as two syllables) as consisting of mare plus land, and possibly lead to a hypothesis about the importance of horse breeding in the state's colonial days! Hence any set of place-name etymologies based entirely on a descriptive analysis of a language, such as this paper admittedly is, must be expected to contain some analyses which, if the history were known, would be treated otherwise. However, it should be apparent that there is less chance for error in an analysis which confines itself to descriptive facts than in one which ignores these facts and has no others on which to build.

the house (tək ~ təhk- *house*). The suffix -mə seldom occurs in the Copainalá dialect as a noun inflectional suffix outside of place-names, but does so in at least one of the Zoque dialects; cf. the Magdalenas dialect form ndəkmə *at my house* (ndək *my house*).

When used in place-names, the relational meanings are less pronounced; the meanings of the suffixes as expressed in translation then depend on the context in which the name is used rather than on the choice of suffix. For example, in names uttered in isolation the suffix acts merely as a place-name indicator: pokyə?mə *Copainalá*, homenahsohmo *Pichucalco*, sakəsmə *Sacalapa*, kehsi?aŋə *Cascajo*. These same suffixes are translated by *at* or *in* when the names occur with a verb like ?ihtu *he is, he lives:* pokyə?mə ?ihtu *he lives in Copainalá*, homenahsohmo ?ihtu *he lives at Pichucalco*, etc. With verbs of motion towards, e.g. maŋba *he goes*, the suffixes are translated by *to* or *into:* maŋba pokyə?mə *he goes to Copainalá*, maŋba sakəsmə *he goes to Sacalapa*, etc. Motion from is expressed by an additional suffix -k: minba pokyə?mək *he comes from Copainalá*.

In sequences which include -mə to constitute place-names, the suffix -way may be used instead of -mə to form nouns or attributives meaning *inhabitant of* or *pertaining to;* e.g. pokyə?way *inhabitant of Copainalá*, kəwənə?way *inhabitant of Tapalapa*, pikuway *inhabitant of Ocozocuautla*. The forms with -way are subject to the same types of inflection as are other nouns, including the addition of locative suffixes with their relational meanings: pokyə?wa?yohmo *among the inhabitants of Copainalá*.[4]

Place-names formed with the suffix -?ohmo add the suffix -pə ~ -wə to form nouns or attributives meaning *pertaining to:* homenahsohmopə pən *man of Pichucalco* (pən *man*).

[4] Cf. place-name (38) ?awa?yohmo, where the suffix -?ohmo now acts as a place-name indicator even when attached to a form with suffix -way.

2.1. Place-names with suffix -mə *at*. This suffix occurs as final member of a large group of names, including most of the important towns of the region. Underlying forms are as follows:

2.1.1. Compound underlying forms with nə? *water, river, arroyo*, etc. as second and head member (followed by -mə). First members and corresponding place-names are:

kuy *tree* (y + n regularly > ñ). (1)[5] kuñə?mə *Coapilla* [(*tree-water*)-*at*];[6] the name apparently refers to a small wooded lake which is the village's water supply and about whose origin there is an interesting legend.

soki *snail*. (2) sokinə?mə *Soteapa* [(*snail-water*)-*at*] (hacienda north of San Fernando); the name refers to a pond which exists there.

kəwə-, probably from kəŋ- *to ripen, paint*, with nominalizing suffix -a ~ -ə (the change from ŋ to w is regular with this suffix). (3) kəwənə?mə *Tapalapa* [(*painted-water*)-*at*] (?); Ocotepec and Tapalapa dialects have the form as kənə?mə.

kanah *salt* (h is lost before n in certain Zoque forms). (4) kananə?mə *Ixtapa* [(*salt-water*)-*at*]; the name clearly alludes to the salt which is taken from Ixtapa and sold commercially in many places.

wəh- *to stink*. (5) wəhñə?mə *Sumuapa* [(*stinking-water*)-*at*] (?). The analysis is uncertain; it coincides semantically with that of (52), but the presence of ñ makes the form problematic.[7]

[5] Actual place-names are numbered consecutively by numbers in parenthesis preceding them; an alphabetical check-list is given in **4** for cross-reference.

[6] Translations placed in square brackets are literal analytical renderings; parentheses and, where necessary, interior brackets, are used as mathematical symbols to show layers of immediate constituents.

[7] The form wəhñə?mə suggests a first member *wəhy-, which would give the form with ñ by regular metathesis. If, however, wəhñə?- be considered as historically from a phrase, -ñə?- may possibly be treated as 3rd. pers. possessed form of nə?, meaning *its water*. This type of analysis could also be advanced for name (8) below.

hon *bird* (taboo form except in compounds) (with reduction of geminate cluster n + n). (6) honə?mə *Tectuapán* [(*bird-water*)-*at*] (?).[8]

way *hair* (or way- *to grind nixtamal*). (7) wayñə?mə *Cunduacán* [(*hair-water*)-*at*] or [(*grinding-water*)-*at*]. Cunduacán is a town in Tabasco which is connected with the earlier history of the Zoques. The form wayñə?mə was recorded in Ocotepec; y + n > ñ in the Copainalá dialect.

?oko-, one of two homophonous morphemes which appear in the forms ?okomama *great-grandmother*, ?oko?une *grandchild*, etc., and in ?okoca? *tenamaste* (*small stone oven*). (8) ?okoñə?mə[9] *Berriozábal* [(*?-water*)-*at*] (?)[10]

həyə *flower*. (9) həyənə?(mə) *Juárez* [(*flower-water*)-*at*], village three leagues north of Copainalá. The name is often used without the locative suffix.

2.1.2. Compound underlying forms with ca? *stone* as second and head member (followed by -mə). First members and corresponding place-names are:

cawi *monkey*. (10) cawica?mə *Usumacinta* [(*monkey-stone*)-*at*]. The name is that of a village on the Grijalva River below Chiapa de Corzo; certain stone figures are said to be visible in the cliff formation on the opposite side of the river, and among these the figure of a monkey.

tah- *to dig*. (11) tahca?mə *San Bartolomé Comixtlahuacán* [(*dig-stone*)-*at*].

takspa, from taks- *to mash* with inflectional suffix -pa; the general use of such forms is verbal *he mashes*, but certain words formed in this way are used as attributives (e.g. pih- *to be hot*, pihpa *hot*). (12) takspaca?mə *Santa Gertrudes* [(*mashed-stones*)-*at*]. The name is that of a ranch one league south of Copainalá.

2.1.3. Compound or derived underlying forms with (-)tək ~ (-)təhk- as second member (followed by -mə). There are alternate possibilities in analysis: the second member may be the suffix -tək ~ -təhk- *place where something abounds*, or in certain cases it may possibly be the noun tək ~ təhk- *house*. First members and corresponding place-names are:

koya *rabbit* (used as free form in Tuxtla dialect and in Copainalá in čo?ngoya *rabbit*). (13) koyatəkmə *Tuxtla Gutiérrez* [(*rabbit-habitat*)-*at*]. This form of the name is the term used in Tuxtla and in other parts of the region; it is, however, seldom heard in Copainalá, where the name has been changed to kowatəkmə. Popular etymology of the latter relates the name to kowa *crime*, with the meaning [(*crime-place*)-*at*], i.e. *place where crimes are handled*, since Tuxtla is now the state capital.

yoko-, unidentified form. (14) yokotəkmə *Tapilula*.

yumih *humble* (Span. *humilde*). (15) yumihtəkmə *Chicoasén* [(*humble-house*)-*at*]. This is the popular etymology, and is descriptively correct except for the possible objection that in making the underlying form a compound with tək ~ təhk-*house* (see above) it deviates from the more general type of place-names in which the second element is a suffix as in (13), (61), and other generalized place designations such as ci?nitək *pine forest*, etc. Becerra[11] relates

[8] An alternate analysis would consider ho- as the equivalent of hoh- in hohpak *canyon, arroyo*.

[9] The ñ suggests a first member ending in y; cf. fn. 7.

[10] An alternate and perhaps better analysis, based on comparative data, relates this name to Mixe ?ok *sediment, settlings*. Monosyllabic stems in Zoque have, under certain circumstances, a combining-stem form in which the stem vowel is reduplicated finally; this points to a possible *?oko or *?ohko historically, and might account for the form in ?okoñə?mə, which would then have a meaning [(*sediment-water*)-*at*]. Cf. (17) below. (Data for Mixe in this article is, unless otherwise stated, from unpublished material collected by Walter S. Miller of the Summer Institute of Linguistics).

[11] Marcos E. Becerra, Nombres Geográficos Indígenas del Estado de Chiapas (Tuxtla Gutiérrez, Chiapas, Mexico, 1930) p. 370. Although Becerra's linguistic analyses must be used with caution, his catalog of place-names has the virtue of being extensive and, in many instances,

the name to "soque *yumí*, congregación, conjunto . . ."; the writer is not familiar with this word, but if the data is correct the name could be treated as derived from this form with the suffix -tək ~ -təhk-. The meaning would then be analyzable as [(*congregación-headquarters*)-*at*]. This may be suggested by the fact that the village of Chicoasén, though of respectable size, is at the present day a 'congregación' or sub-community within the municipio of Copainalá.

2.1.4. Other compound or derived underlying forms (followed by -mə) with their respective place-names are:

pokyə?- *act of running, fleeing;* from poy- *to run, flee*, with nominalizing suffix -kə?. (16) pokyə?mə *Copainalá* [(*running* or *fleeing*)-*at*].

?okha-; the first constituent is ?ɔk-, probably cognate with Mixe ?ok *sediment, settlings;* second constituent ham *lime, ashes*, with loss of m in a cluster before -mə.[12] (17) ?okhamə *Tecpatán* [(*sediment?-lime*)-*at*].

ho?niti-; the first constituent is hon *bird* (cf. (6) above); the second constituent is ?iti, from ?iht- *to exist, dwell* with nominalizing suffix -i ~ -e. (18) ho?nitimə *Quechula* [(*bird-dwelling*)-*at*]. The village of Quechula is situated on the Grijalva River; various conjectures have been made as to the species of bird to which both the Zoque and Spanish (Nahuatl) name refer.[13]

ka?pak-; ka?- *to die*, -pak ~ -pahk *arroyo* (used in compounding). (If correct, this form is a unique example of a verb stem being compounded with -pak; possibly another analysis is to be sought for). (19) ka?pakmə *Nicapa* [(*die-arroyo*)-*at*]. (?).

kupi-; etymology undetermined. (20) kupimə *Ocotepec*.[14]

?a?yaŋ-; probably from ?ay *leaf* plus -?aŋ, suffix which commonly in the language is a nominalizing suffix attached to verbs but which occurs in a few cases with non-verb stems (cf. (25) and (68) below), with meaning loosely definable as *place*. (21) ?a?yaŋmə *Ixhuatán* [(*leaf-place*)-*at*] (?).[15]

kuyate-; no satisfactory analysis has been found. The form suggests a first constituent kuy *tree*, but the remainder is obscure. (22) kuyatemə *Magdalenas*.

piku-; etymology undetermined. (23) pikumə *Ocozocuautla*.[16]

of furnishing geographical or linguistic information which is of value.

[12] The stem appears also in the form cited (i.e. without m) in ?okhaway *inhabitant of Tecpatán*. With regard to ?ok-, there is a homophonous morpheme in Mixe which means *after*; it occurs in Zoque in ?okpak *hip*, ?oknəkcahk- *to leave an inheritance*, and in certain other forms. Cf. fn. 10.

[13] See Becerra, pp. 168, 271. His preference for identifying the quechol or kecholi with the 'chocolatera' (Platalea aiai L.) is based on an over-analysis of the Zoque form.

[14] The structure of kupi- would suggest a regularly nominalized form of a verb *kuhp-; no such verb has been discovered, however. Or it could be from kuy *tree* plus a form *pi (the loss of y would be regular); but the second constituent is unidentifiable unless related to pih- *to be hot*. Becerra (p. 79), when interpreted phonemically, derives kupimə from kəpi *firewood*. This analysis would be most welcome because of its simplicity and possible parallel to the Spanish (Nahuatl) name, but cannot be accepted as correct until some pattern of phonemic correspondence between u and ə is demonstrated in the Zoque-Mixe languages.

[15] Becerra (pp. 18, 24, 149) gives a somewhat similar meaning to both the Zoque and the Spanish (Nahuatl) names, alluding to the use of corn leaves for the making of tamales. A native Copainalá informant, when asked for his own etymology of the name, related it to ?ay *leaf* and referred to the banana leaves which grow in abundance in the place named.

[16] An analysis has been suggested which derives pikuway *inhabitant of Ocozocuautla* from Spanish pico *peak* and Zoque ?ay *leaf*, and translates it in Spanish as *hombres de hojas con picos* in allusion to certain artifacts discovered in the vicinity. This analysis, however, is an anachronism, with a Spanish name applied to a pre-Spanish characteristic; and is especially untenable since -way is the regular suffix indicating *inhabitant of*. The analysis offered by Becerra (p. 259) derives the name "del soque-mije *pij*, bolsa; . . . *ko*, cabeza, cosa principal. . . ." This is conceivable, as Zoque ko- *head* does correspond to Mixe ku-; but in all observed forms this morpheme is used prefixially, and such a suffixial use would be in violation of the present pattern of the language.

kekahpa-; analysis uncertain. (24) kekahpamə *Pantepec.*[17] (Ocotepec and Tapalapa dialects kekpyamə).

sawa?ŋduku-; if the first immediate constituent is taken as sawa?ŋ-, from sawa *wind, air*, plus -?aŋ *place* (cf. (21)), the second constituent *tuku remains obscure; the alternative is to analyze the form as sawa *wind, air* plus *?aŋduku, the latter consisting of a prefix ?aŋ- (which exists in certain nouns and verbs) and a form of undetermined meaning. Neither analysis appears adequate. (25) sawa?ŋdukumə *Buenos Aires* [([*wind-place*]-*?*)-*at*]; the name is that of a pass on the trail north of Copainalá, and an allusion to the fresh breeze which is always noted there.

popak-; the first constituent po- probably is from popo *white;* the second and head constituent is -pak *arroyo*. (26) popakmə *Ixtacomitán* [(*white-arroyo*)-*at*].[18] (The form is from the Magdalenas dialect).

?awu *grasshopper* (*chapulín*). (27) ?amə *Chapultenango* [*grasshopper-at*]. The form is that used in the Ocotepec dialect; for the Copainalá form see (38) below.[19]

kečkə?-. The form suggests a verb kehc-[20] with nominalizing suffix -kə? as in (16); such a stem does exist with meaning relating to *to steal* or *do mischief* in the verb keckətəhkəy-, used of an animal stealing something. (28) kečkə?mə *Ostuacán* [(*mischief-act*)-*at*] (?).[21]

The name (29) capaskečkə?mə, which designates a mythical town southeast of Magdalenas, may be analyzed either as a compound of capas *red* plus (28) kečkə?mə, or as from an underlying capaskečkə?-(capas *red* plus kečkə?- as above) plus -mə. In either case the attributive element capas probably refers to the red earth believed to exist there and with which the inhabitants are said to pay for merchandise brought to their town by certain venturesome souls (in whose hands the earth is believed to turn to gold upon returning home). The inhabitants (capaskečkə?way or capaskə?way) are believed to be sorcerers and are held responsible for several catastrophes in the folk-history of the region. A highly speculative but possible explanation for the etymology of kečkə?mə given above is that the name (whether originally applied to the now mythical place or to the present town of Ostuacán) may have been an allusion to the mischief-making character of the inhabitants.

2.2. Place-name with suffix -kəsmə[22] *above*. This suffix occurs as a place-name suffix after the underlying form *sak- in the name (30) sakəsmə *Sacalapa* (settlement a short distance northeast of Copainalá). The name is possibly a loan word from the Spanish (Nahuatl) name.[23] The form sakəsmə is

[17] The underlying form suggests a verb *kekah-, which could be regularly formed from a noun-like word *kehk or *kek; none of these forms have been discovered, however. Becerra (pp. 271–2; cf. p. 252) lists four forms of the name; his analysis of the form Quejpomo, interpreted phonemically, is keh- *appear* plus poks- *sit* plus -mə, which he translates as "lugares o montes sobrepuestos o sentados." This parallels the etymology of the Spanish (Nahuatl) name given by him and certain others, but appears to me as far-fetched.

[18] Becerra (p. 150) writes "Popacnó", which written phonemically would be popaknə? [(*white-arroyo*)-*water*]. He implies, however, that -pak is the homophonous noun pak- ~ pahk- *bone*, and would presumably translate as 'arroyo de los huesos blancos' [(*white-bone*)-*water*]. The frequent occurrence of -pak ~ -pahk- *arroyo* in place-names, however, even when followed by nə? *water*, lends greater probability to the analysis given above.

[19] Cf. the corresponding forms in the Magdalenas dialect: ?ahu *grasshopper*, ?ahumə *Chapultenango*.

[20] Becerra (p. 273) writes "Quetscoma," although his analysis is different from that given here.

[21] An alternative analysis would relate kečkə?mə to Mixe keeč *pulque, maguey*, with some form of this as first immediate constituent followed by the locative suffix -kə?mə *below* (cf. **2.3**) as second constituent. Cf. (93) below.

[22] The suffixes -kəsmə, -kə?mə, -kəsi are actually inflected forms consisting of bound stem plus suffix; in the noun morphology, however, they function as immediate constituents to the forms to which they are attached, and are most conveniently treated as unitary suffixes.

[23] Or is the Spanish name a Nahuatlization of the Zoque, with influence of popular etymology? (The Nahuatl form alludes to the circumstance that the place itself is—in comparison with the surrounding area—productive of grass).

commonly used only in the vicinity of Copainalá, i.e. where the place referred to is geographically above the speaker. For the name sakəʔmə as a designation of the same place, see (31) below.

2.3. Suffix -kəʔmə[24] *below* occurs occasionally in place-names with names of mountains, and in the variant form (31) sakəʔmə *Sacalapa;* cf. (30) above. This form is used when the speaker is located on one of the mountains above the community named, i.e. where the place referred to is below the speaker.

2.4. Place-names with suffix -kəsi[25] *on, on top of.* This suffix occurs with names of certain mountains or prominences. It may be used optionally with a number of other names of mountains not listed in this section; those underlying forms with which it occurs most consistently are the following:

ʔaŋnoʔŋ-; analysis uncertain. (32) ʔaŋnoʔŋgəsi *certain peak south of Arroyón.*

ʔnəʔaŋ(-); probably analyzable as nəʔ *water* with suffix -ʔaŋ; cf. (21) above. (33) nəʔaŋ(gəsi) *mountain near Ocotepec* [(*water-place*)-*on*]; place where some of the people of Copainalá go to plant their cornfields.

tuwihaʔmguy(-). The first immediate constituent is a compound verb stem tuwihəʔm-, from tuwi *dog* as incorporated object plus həʔm- *to hang;* the second immediate constituent is -kuy, nominalizing suffix. (34) tuwihəʔmgukyəsi *Cerro del Perro Colgado* [([*dog-hanging*]-*act*)-*on*]; mountain several leagues north of Copainalá, where some go to plant cornfields. (The name also occurs without the suffix as tuwihəʔmguy).

neʔŋ- ~ neʔŋna(-); etymology uncertain; descriptively relatable to neʔŋ- *foot, pertaining to the foot.* (35) neʔŋgəsi ~ neʔŋna(kəsi), *mountain near Copainalá.*

2.5. Place-names with suffix -ʔohmo *in, among.* (The form -oʔmo occurs in certain names whose underlying forms end in a vowel; this is in accord with a common morphophonemic phenomenon in the language). This suffix occurs with a number of place-names, several of which are Spanish loans. Underlying forms with their respective place-names are as follows:

homenahs-; the second or head constituent of the compound is nas ~ nahs- *earth, land;* the first constituent is home *new.* (36) homenahsohmo *Pichucalco* [(*new-land*)-*in*]; Becerra (pp. 167, 260) explains the name as that given to a historically recent resettlement of the town, to which was given this name and its Spanish counterpart, Pueblo Nuevo de Pichucalco.

məhamuʔk-; məha *big* plus muʔk *grass.* (37) məhamuʔkohmo *San Cristóbal* (*Ciudad Las Casas*) [(*big-grass*)-*in*].

ʔaway *inhabitant of Chapultenango;* the first constituent is from ʔawu *grasshopper* as in (27) above; the second is the suffix -way *inhabitant of.* The form ʔaway is used as underlying form for a back-formation name with -ʔohmo as follows: (38) ʔawaʔyohmo *Chapultenango* [(*Chapultenango-inhabitant*)-*in*]. This form of the name is that used in Copainalá; cf. the Ocotepec form (27) above.

ʔanima, from early Spanish name *San Fernando Las Animas.* (39) ʔanimaʔohmo *San Fernando* (*Villa Allende*) [(*Las Animas*)-*in*].

palma, from Spanish name. (40) palmoʔmo *Las Palmas* [(*Las Palmas*)-*in*]; hacienda west of Copainalá.

gwadalupe, from Spanish name. (41) gwadalupoʔmo *Guadalupe* [*Guadalupe-in*]; village near Copainalá.

mehiko, from Spanish name. (42) mehikoʔmo *Mexico City* [*Mexico-in*].

biya-, from Spanish name. (43) biyaʔohmo *Villahermosa* (*Tabasco*) [*Villa-in*].

paso, from Spanish paso *crossing.* (44) pasoʔmo *El Paso* [*crossing-in*]; crossing of Grijalva River below Chicoasén.

2.6. Place-names with suffix -ʔaŋə *at.* This suffix occurs with a limited number of

[24] See fn. 22.
[25] See fn. 22.

place-names. Underlying forms with their respective place-names are as follows:

kehsi *gravel* (*cascajo*). (45) kehsi?aŋə *Cascajo* [*gravel-at*]; point on Tuxtla trail south of Santo Domingo.

sikete *species of tree*. (46) sikete?aŋə, point where there is a cross, on Tuxtla trail north of Grijalva River.

cumikuy; compound of cumi *species of thorny tree* with kuy *tree*. (47) cumiku?yaŋə [(*thorn-tree*)-*at*]; point on Tuxtla trail.

3. Place-names without locative suffixes. These are classified by the forms which they take as second immediate constituent (= head member in the case of compounds).

3.1. The following forms are compounded with nə? *water*, *river*, *arroyo*, etc. as final and head member to give the names listed:

nak ~ nahk- *frog*, *toad*. (48) naknə? *Iturbide* [*frog-water*]; village north of Copainalá.

naskanah *saltpetre*,[26] compound of nas ~ nahs- *earth* and kanah *salt*. (49) naskananə? *Nascananó* [*saltpetre-water*]; village north of Copainalá.

-pak ~ -pahk- *arroyo*, *ravine;* homophonous with pak ~ pahk- *bone;* the former is semantically the more probable, as it occurs repeatedly in place-names; however, in all other observed occurrences it is used only suffixially. (50) paknə? [*ravine-water*]; ranchería north of Copainalá.

kakawa *cacao*. (51) kakawanə? *Santo Domingo* [*cacao-water*]; hacienda near Copainalá.

wəhpa, from wəh- *to stink* with inflectional suffix -pa; cf. structure of (12) above. (52) wəhpanə? [*stinking-water*]; spring on trail north of Copainalá; the name evidently alludes to a type of oil which is found in the water.

yomo *woman*. (53) yomonə? [*woman-arroyo*]; place and stream in Tecpatán region.

[26] Meaning taken from Becerra (p. 225), who translates the place-name as 'agua salitrosa.'

*tu?ckaŋ- (?), meaning uncertain. The form, if correct, may be treated as a compound of tu?c *tail*, and kaŋ *jaguar*. Its meaning, assuming it to be a regular compound of attributive plus head, would then be something like *tail-jaguar;* possibly a reference to some species of jaguar, but the form has not been found except in the name below. The form *tu?ckaŋ- is itself questionable, since no pattern for the dropping of ŋ before n has been observed in Zoque. (54) tu?ckanə? *Sandino* [(*tail-jaguar*)-*water*] (?); settlement two leagues north of Copainalá.

hapak-; from -pak ~ -pahk- *arroyo*, with prefix or shortened stem ha-, whose meaning has not been determined.[27] (55) hapaknə? *River Grijalva* [*canyon-water*] (?). (Magdalenas dialect has hapyaknə?).

sospa-, from sohs- *to cook* with inflectional suffix -pa as in (12) above; the alternate analysis given by Becerra, however, appears preferable if the vowel changes can be explained.[28] (56) sospanə? *Solosuchiapa* (form taken from Magdalenas dialect).

womba, from wom- *to flow* (as water from a fountain), with inflectional suffix -pa as in (12) above. The Spanish place-name (57) Bombaná (also written Bombanó), although no Zoque equivalent has been observed, apparently is from this form. The term wombanə? [*flowing-water*] is in common use in Zoque to indicate *spring*, *fountain;* Becerra (p. 42) correctly identifies the name Bombaná with it.

3.2. The following forms are compounded with ca? *stone*, *rock* as final and head member to give the names listed:

[27] Becerra (p. 157) cites a form "soque *jaan*, hondonada," which may well be the source of ha- in the place-name; the river is characterized by the famous canyon known as the Sumidero through which it flows. For loss of n in similar phonetic surroundings, cf. Zoque witəm *eye*, from win *face*, *body* (cognate with Mixe win *eye*), plus təm *seed*.

[28] Becerra, p. 311: "*Shoshpo-nó*, río de los *chospos*, *sospoes*, o *silosúchiles*; del soque *shoshpó*, cierta planta (Bombax ellipticum, H.B.K.); i *no*, agua."

wakasnaka *sandal* (from wakas *cow* plus naka *skin, leather*). (58) wakasnakaça? *Piedra de Caite* [*sandal-rock*]; point on trail near village of Arroyón.

ho?nehkuy, from verb *ho?nehk- with nominalizing suffix -kuy. The underlying verb is from nehk- *to stack*. (59) ho?nehkuča? [(*stacking-act*)-*rock*]; point halfway up mountain north of Copainalá; the allusion is to a layered formation or rock at the place named.

maktuma-*eleven* (frequently occurring elsewhere with suffix -?y as maktuma?y *eleven*). The Spanish name (60) Mactumatsá [*eleven-stones*] is most simply described as from this form plus ca? *stone*. It is the name of a mountain near Tuxtla Gutiérrez which is connected with the traditions of the Zoques of that section.[29]

3.3. The following forms occur with (-)tək ~ (-) təhk- as second immediate constituent (cf. **2.13** above) to give the names listed:

po?ah *balsa tree* (*majagua* or *jonote*). (61) po?ahtək [*balsa-habitat*]; community located just north of Copainalá; the name alludes to the presence of the majagua trees in the place.

?ips *twenty*. (62) ?ipstək *Veinte Casas* [*twenty-house*],[30] name given to two mythical towns which are thought of as the abode of the nagual spirits. The more important of the two is norte ?ipstək [*norther-*(*twenty-house*)], said to exist southwest of Copainalá and in the general direction of Ocozocuautla, and to be visible from the village of Juárez as a place in the mountains where the rocks show white. It is believed to be the abode of the 'stronger' nagual spirits, and to be connected with the source of the rains known in Spanish as nortes (*northers*). The other place is called hamanas ?ipstək [(*nagual-land*)-(*twenty-house*)] (hamanas probably from hama *nagual spirit* and nas *land*, but homophonous with the current form hamanas *hot country*); it is conceived to exist near Pueblo Nuevo and to be the dwelling place of those naguales who are too 'strong' to wander aimlessly but not 'strong' enough to be residents of norte ?ipstək.[31]

3.4. The following forms occur with -pak ~ -pahk- *arroyo* as head contituent to give the names listed:

cin *pine* (*ocote*). (63) cinbak [*pine-arroyo*] (also cinbaknə? [(*pine-arroyo*)-*water*]); arroyo and ranchería between Magdalenas and Nascananó.

kaŋ *jaguar* (*tigre*). (64) kaŋbak [*jaguar-arroyo*], place west of Magdalenas.

wetunə?-; wetu *fox* (*gato de monte*) plus nə? *water*. (65) wetunəpak *Arroyón* [(*fox-water*)-*arroyo*]; village on main trail south of Copainalá.

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[29] Popular etymology defines the name as meaning *eleven stars*, thus taking maca *star* instead of ca? *stone* as head of the construction; this however assumes the loss of a syllable by some process of haplology for which no parallel has been observed. Becerra (p. 180) rejects both etymologies in favor of one which appears quite far-fetched but which he defends negatively on the premise that "los indios soques nunca pronuncian *Mactumatsá* sino *Mashtumatsá*, en donde la idea de 'once' ya no tiene lugar."

[30] This analysis represents the popular etymology as exemplified in the Spanish name, and is in fact the only analysis apparent from a descriptive standpoint. Since, however, tək *house* is homophonous with the suffix -tək *place where something abounds*, it is possible that another etymology is to be sought historically, perhaps with a different history also for the first constituent ?ips. A possible parallel is found in Mixe ?ipṣkəṣp, the name given to the mountain of Zempoaltepetl in Oaxaca, which is closely associated with Mixe mythology. The form is from Mixe ?ipṣ *twenty* and -kəṣp *above, on top of*, the latter occurring suffixially with nouns as in mesakəṣp *on the table*. The name is translated *Veinte Picos*, which is said to correspond also to the meaning of one of the two Zapotec names for the same mountain (the other Zapotec name meaning *rain mountain*).

[31] For further data on beliefs concerning ?ipstək and the nagual, see my Textos en Zoque sobre el Concepto del Nagual, Tlalocan 2, no. 2 (Mexico, 1946).

tona-, derivation uncertain.[32] (66) tonapak, village between Magdalenas and Chapultenango. (The form in the Magdalenas dialect is to?napak).

takica-; descriptively analyzable as from taki *hoof* (or *seed of the mamey*) and ca? *stone*. (67) takicapak [(*hoof-stone*)-*arroyo*]; village two leagues north of Copainalá.

hama?ŋ-; derivation uncertain, but the form is that which would be expected by combining hama *sun, day* with the suffix -?aŋ *place;* cf. (21). (68) hama?ŋbak [(*sun-place*)-*arroyo*] (?); first stream south of Copainalá on Tuxtla trail.

pucənə-; probably from pu?cə *yellow* and nə? *water;* the loss of the ? in the first constituent is unexplained, however. (69) pucənəpak [(*yellow-water*)-*arroyo*] (?); place near village of Guadalupe.

no?ci-, etymology unknown. (70) no?cipak, second stream south of Copainalá on Tuxtla trail.

3.5. The following forms are representative of those found combined with kocək ~ kocəhk- *mountain* as head member. This type includes most names of mountains:

paknə?, place-name (50) above. (71) paknə?kocək *Cerro de paknə?* [(*ravine-water*)-*mountain*]; mountain near paknə?.

nə?aŋ, place-name (33) above. (72) nə?-aŋgocək *Cerro de nə?aŋ* [(*water-place*)-*mountain*]; mountain near place named.

makin, apparently a Spanish loan, but with meaning uncertain. (73) makingocək *La Peña del Maquín* [*Maquín-mountain*] (also recorded as məkingocək from one informant); mountain just north of Copainalá and west of the trail leading to Juárez.[33]

sakə?way-, back formation from (31) sakə?mə with addition of suffix -way *pertaining to* to sakə?- as underlying form. (74) sakə?wakyocək *Cerro de Sacalapa* [(*Sacalapa-pertaining*)-*mountain*]; mountain near Sacalapa.

?ašupepe-, derivation unknown. (75) ?ašupepekocək, mountain to north of and above Sacalapa.

yumihtu?c-; first constituent yumih *humble, inferior* (*humilde*), second and head constituent tu?c *tail.* (76) yumihtu?ckocək [(*inferior-tail*)-*mountain*], peak ascending between the mountains named in (74) and (75), noticeable in appearance but lower than either mountain.

sokosokonə?-; the first immediate constituent sokosoko- is a reduplicated form of soko *spring;* the second is nə? *water.* (77) sokosokonə?kocək *Cerro de Coapilla* [([*spring-spring*]-*water*)-*mountain*]; mountain range near Coapilla.

hu?ki *vulture* (*zopilote*). (78) hu?kikocək [*vulture-mountain*], unidentified mountain near Guadalupe.

niwi *chile.* (79) niwikocək *Cerro de Chile* [*chile-mountain*]; name of mountain just south of Copainalá, in which are supposed to be imprisoned the two capaskečkə?way men who caused a flood in Copainalá according to an important local legend.

soka *bachelor, unmarried man.* (80) sokakocək [*bachelor-mountain*], mountain west of Copainalá.

cawica?way *inhabitant of* or *pertaining to Usumacinta,* formed by addition of suffix -way to underlying form of place-name (10) above. (81) cawica?wakyocək *El Boquerón, Cerro de Usumacinta* [([*monkey-stone*]-*pertaining*)-*mountain*]; mountain rising from bank of river opposite town of Usumacinta, connected with legend of treasure left by Moctezuma.

mona-, probably nominalized form of mon- *to wrap, envelop.* (82) monakocək [*enveloped-mountain*], peak west of Las Palmas, probably in the State of Veracruz. The name, if correctly analyzed here, is apparently an allusion to the clouds which

[32] A stem to?n-, with meaning something like *to quarrel,* occurs in reduplicated form in wehto?-nto?nay- *to quarrel loudly.* One type of nominalized form of this stem would be *to?na; this etymology is possible but appears far-fetched.

[33] All mountains are believed to have a komi (*dueño* or *patrón*); in the case of makingocək the komi is a beautiful woman, spoken of in Spanish as a 'villanera'.

envelop the mountain preceding a rain—the mountain itself being thought of as connected with the rain's origin.[34]

3.6. A few names are formed with nominalizing suffix -kuy, which regularly denotes act or instrument when suffixed to verb stems. Besides the following forms to which are added this suffix, cf. tuwihəʔm- (34), and the form underlying (59):

mehcaŋgen-; first immediate constituent from mec- ~ mehc- *two* plux suffix -aŋ used in certain numeral forms; second immediate constituent ken- *to see*. (83) mehcaŋgenguy *Buenavista* [*(two-see)-ing*]; place between Copainalá and Magdalenas. The name apparently alludes to the same features suggested by the Spanish name.

winmaʔŋ-; etymology uncertain; suggestive of win *body, person* or win *point*, plus maŋ- *to go;* the place-name is quite possibly, however, a Spanish loan modified to fit the Zoque morpheme pattern. (84) winmaʔŋguy *Huimango*, a prominent table-like mountain just east of Copainalá. (One informant gave a popular etymology of the name by relating it to nimaʔŋəy- *to walk as on a level place*, with the statement muspatə nimaʔŋəyu *we can walk as on the level.*)

3.7. The following forms are combined with məʔnə *mountain top* (*cumbre*) as head member to give names of mountain passes:

caʔucuʔ-; etymology uncertain; the second constituent is apparently cuʔ *night*, and the first may be a form from the morpheme caʔ- *evening*. (85) caʔucuʔməʔnə [*(evening-night)-mountain top*] (?), first pass on road from Copainalá to Tecpatán; if the analysis suggested is correct, the allusion could be to the fact that the place lies (from Copainalá) near the place of the sunset.

[34] There is said to exist on top of the mountain an image some eighteen inches in height. It has been suggested that this fact, rather than the presence of the rain-clouds, may be that to which the name refers. Certain dialects of Spanish use mono to mean *image* in addition to *monkey*; this is borrowed in Mixe as mona *stone image.*

sukunas; second constituent nąs *land*, first member suku- is a possible form of suhk- *to cool.* (86) sukunas(məʔnə) [*(cool-land)-mountain top*] (?), pass on mountain north of and above Sacalapa; it is located in what is thought of as cool country, in the direction of (90) caʔmanas.

3.8. A few forms are combined with həʔŋ *plain*:

hamay *palo de jobo* (*species of tree*). (87) hamayhyəʔŋ [*jobo-plain*], plain west of Copainalá, just beyond airport.

ʔoyna-, etymology unknown.[35] (88) ʔoynahəʔŋ, plain above Sacalapa.

3.9. Certain forms occur with nas *earth, land;* in addition to the following cf. the underlying forms of (36, 86):

popo *white.* (89) poponas *Tierra Blanca* [*white-land*]; village west of Copainalá.

caʔma *bush* (*monte*). (90) caʔmanas *Tierra Fria* [*bush-land*]; region between Copainalá and Ocotepec where many from Copainalá make their cornfields.

hama *sun, day.* (91) hamanas [*sun-land*], general term for tierra caliente or hot country; contrast hamanas ʔipstək listed under (62).

3.10. Three other names without locative suffixes are:

(92) pyoŋbaču?we [*burning-(old woman)*]; from ču?we *old woman* (pejorative or joking term), with attributive constituent pyoŋba 3 sing. transitive of poŋ- *to burn;* name of active volcano near Magdalenas.

(93) hoʔtikec, unidentified place near Copainalá. Etymology uncertain, but cf. keč- in (28) above.

(94) yəki *Chiapa de Corzo* (form taken from Tuxtla dialect). No entirely satisfactory analysis has been made; Becerra (p.

[35] The medial cluster yn is unique and data should be checked.

369) derives the name from yək ~ yəhk- (he writes yoki) *black*.[36]

4. Alphabetical check list, indexed by the numbers assigned to place-names in the preceding sections of the article. Spanish equivalents are given when such exist; other names exist only in the Zoque forms.

biya?ohmo *Villahermosa* (43)
Bombaná (Spanish) (57)
capaskečkə?mə (29)
cawica?mə *Usumacinta* (10)
cawica?wakyocək *El Boquerón* (81)
ca?manas *Tierra Fria* (90)
ca?ucu?mə?nə (85)
cinbak (63)
cumiku?yaŋə (47)
cuni(pən) *Indian, Zoque*[37]
gwadalupo?mo *Guadalupe* (41)
hamanas *tierra caliente* (91)
hamanas ?ipstək (see under 62)
hamayhyə?ŋ (87)
hama?ŋbak (68)
hapaknə? *Rio Grijalva* (55)
homenahsohmo *Pichucalco* (36)
honə?mə *Tectuapán* (6)
ho?nehkuča? (59)
ho?nitimə *Quechula* (18)
ho?tikec (93)
hu?kikocək (78)
həyənə?(mə) *Juárez* (9)
kakawanə? *Santo Domingo* (51)
kananə?mə *Ixtapa* (4)
kaŋbak (64)
kaseru *Tzotzil, traveller*[38]
kasnambən *Ladino*[39]
ka?pakmə *Nicapa* (19)
kečkə?mə *Ostuacán* (28)
kehsi?aŋə *Cascajo* (45)
kekahpamə ~ kekpyamə *Pantepec* (24)
koyatəkmə ~ kowatəkmə *Tuxtla Gutiérrez* (13)
kuñə?mə *Coapilla* (1)
kupimə *Ocotepec* (20)
kuyatemə *Magdalenas* (22)
kəwənə?mə *Tapalapa* (3)
Mactumatsá (Spanish) (60)
makingocək *La Peña del Maquín* (73)
mehcaŋgenguy *Buenavista* (83)
mehiko?mo *Mexico City* (42)
monakocək (82)
məhamu?kohmo *San Cristóbal* (*Cd. Las Casas*) (37)
naknə? *Iturbide* (48)
naskananə? *Nascananó* (49)
ne?ŋgəsi ~ ne?ŋna(kəsi) (35)
niwikocək *Cerro de Chile* (79)
norte ?ipstək (see under 62)
no?cipak (70)
nə?aŋ(gəsi) (33)
nə?aŋgocək (72)
paknə? (50)
paknə?kocək (71)
palmo?mo *Las Palmas* (40)
paso?mo *El Paso* (44)
pikumə *Ocozocuautla* (23)
pokyə?mə *Copainalá* (16)
poponas *Tierra Blanca* (89)
popakmə *Ixtacomitán* (26)

[36] Three names indicating status will also be noted. Two of these are combined with pən *man* as head constituent.

cuni *Indian* usually occurs in the compound cunipən [*Indian-man*]; rarely as a free form. It is the term used by the Zoques to designate themselves or their language, also used to speak of any Indian group as contrasted with the Ladinos or Spanish-speaking people. When specifically referring to the language, the compound form is frequently combined with a nominalized form of cam- *to speak* or ?otoŋ- *to talk*, giving respectively the forms cunipəncame [(*Indian-man*)-*speech*] or cunipə?notowe [(*Indian-man*)-*talk*].

kasnam-*Ladino* occurs in the form kasnambən [*Ladino-man*], used mostly when referring to the 'gente decente' or upper-class people of Spanish or foreign descent. It is apparently an early Spanish loan from the word castellano or one of its derivatives. The name for the Spanish language is kastiya, also a Spanish loan.

kaseru, name applied to the Tzotzil Indians, both those who travel as carriers and those living in neighboring villages; it is also used, less frequently, of any traveller, including the Zoques themselves, when away from home. The name is from Spanish casero.

[37] See fn. 36.

[38] See fn. 36.

[39] See fn. 36.

po?ahtək (61)
pucənəpak (69)
pyoŋbaču?we (92)
sakəsmə ~ sakə?mə *Sacalapa* (30, 31)
sakə?wakyocək *Cerro de Sacalapa* (74)
sawa?ŋdukumə *Buenos Aires* (25)
sikete?aŋə (46)
sokakocək (80)
sokinə?mə *Soteapa* (2)
sokosokonə?kocək *Cerro de Coapilla* (77)
sospanə? *Solosuchiapa* (56)
sukunas(mə?nə) (86)
tahca?mə *San Bartolomé* (11)
takicapak (67)
takspaca?mə *Santa Gertrudes* (12)
tonapak ~ to?napak (66)
tuwihə?mgukyəsi *Cerro del Perro Colgado* (34)
tu?ckanə? *Sandino* (54)
wakasnakaca? *Piedra de Caite* (58)
wayñə?mə *Cunduacán* (7)
wetunəpak *Arroyón* (65)
winma?ŋguy *Huimango* (84)
wəhñə?mə *Sumuapa* (5)
wəhpanə? (52)
yokotəkmə *Tapilula* (14)
yomonə? (53)
yumihtəkmə *Chicoasén* (15)
yumihtu?ckocək (76)
yəki *Chiapa de Corzo* (94)
?amə *Chapultenango* (27)
?anima?ohmo *San Fernando* (39)
?aŋno?ŋgəsi (32)
?ašupepekocək (75)
?awa?yohmo *Chapultenango* (38)
?a?yaŋmə *Ixhuatán* (21)
?ipstək *Veinte Casas* (62)
?okhamə *Tecpatán* (17)
?okoñə?mə *Berriozábal* (8)
?oynahə?ŋ (88)

THE PHONEMES OF KERESAN

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1. Introduction
2. Consonantal phonemes
3. Syllabification and consonant clusters
4. Vowel phonemes

1. The ethnography of the Pueblos of the Rio Grande Valley has been comprehensively treated in the careful work of Elsie Clews Parsons, Leslie A. White, and many others. The languages of the area, and in particular, Keresan, have been subject to some unfortunate neglect. Indeed, the only careful investigation of Keres is that undertaken nearly thirty years ago by Franz Boas, to whom we are indebted for two volumes of texts with translations as well as a short text with an accompanying grammatical analysis.[1]

Keresan linguistic data were collected by the writer between September, 1938, and June, 1940. The investigation was continued into the summer and fall of the latter year when it was found possible to reside at or near various of the Keresan-speaking Pueblos. Informants from all of the seven towns in which Keresan is spoken were employed and the sincere thanks of the writer is due them. For her kindness in reviewing and criticizing the present manuscript, the writer wishes to express his appreciation to Mary R. Haas.

Keresan is spoken by the some 6,000 inhabitants of the Pueblos of Cochiti, Santo Domingo, San Felipe, Sant'Ana, Zia, Laguna, and Acoma, Indian villages located in the northern Rio Grande Valley of New Mexico. Keresan constitutes an isolated linguistic entity, being apparently quite distinct from any of the more inclusive language families of North America. Such phonetic resemblances as occur between Keresan and some of the adjacent Pueblo languages, such as that of Zuñi, or of the Tanoan groups, are apparently no more than superficial sound patterns applicable to large connected areas of the American Southwest. Keresan, moreover, offers certain unique morphological problems which are in no way comparable to those evident in Tewa, Tiwa, Towa, or Zuñi.

The name Keresan (= Keres, Kera, Queres, etc.) is not a native word and as a result offers something of a puzzle. There is no proof for the contention of some authors that the term represents an early Spanish corruption of the proper name Querena (ke·rá·n), which refers to a secret medicine society. No question exists, however, that the appellation was applied by outsiders. In keeping with the marked social solidarity of each Pueblo there is no recognition of relationship between towns, nor any name for the common idiom. While one Pueblo says of another "We can understand each other", each town purports to have its own language.

This matter gives rise to the question of dialects. Boas recognized two principal dialects of the Keresan language: a southern, sometimes called western, spoken in Acoma, Laguna, and Zia, and a northern, or eastern, spoken in the remaining Pueblos.[2] Earlier writers, such as Gatschet, Bandelier, Curtis, and others, held slightly different views on the subject but most are agreed that two principal dialects may be recognized. The basis on which the divisions were made is not clear nor is the present writer convinced that the dialectic problem of Keresan can be so easily resolved. Each Pueblo says of itself that it 'talks straight', i.e. that it alone

[1] F. Boas, Keresan Texts, AES-P 8(1928) A Keresan Text, IJAL 2.171–80 (1923).

[2] Ibid. p. 171.

possesses the uncorrupted form of the language, while the six others are said to 'talk to the side'. Actually, phonetic differences between the Pueblos are not marked; there is as great a range of phonetic variation in a single Pueblo as there is between all of the towns taken together. Each town may be said to have its own dialect but it is equally true that Sant'Ana, San Felipe, Santo Domingo, and Cochiti have more in common with each other by way of general vocabulary and phraseology than they do with the towns to the south and west. Similarly, Zia, Laguna, and Acoma are more closely related to each other in speech than they are to the northern group. But the dialectic differences are primarily neither phonetic nor grammatical; lexicographic distinctions appear to lie at the base of the dialectic division. Localisms in word and phrase have arisen in each Pueblo, reflecting the cultural concept that each regards itself as the center of the world and as quite independent from its relatives in culture and speech. It should be mentioned that town endogamy, still the rule in the majority of cases, although now subject to some disruptive influences, tends to enforce linguistic isolation and local dialect. The native Pueblo of the individual speaker is recognized at once by the phraseology he employs.

Most Keres today are bilingual. The majority of the older generation speak New Mexican Spanish, while younger people, as a result of compulsory education, are at home in English. A fairly large number of Keres who trade throughout the northern areas of New Mexico at frequent intervals can converse quite adequately in Navaho, Zuñi, or in one or more of the Tanoan languages. Two migrations of Keresan-speaking people have taken place in recent times. One group is settled in Isleta, a Tiwa-speaking town, while another is located at Hopi.

Words in isolation, as when given, for example, in paradigms, tend to be rendered with a marked distortion of the basic phonetic elements. This is particularly true with respect to the release of both consonantal and vocalic forms in final position. Since words in isolation tend to assume a somewhat variable phonetic character, examples in the following paper are given in the form in which they appear in context.

Words in Keresan may range from monosyllables, kótʸ *forest*, to forms containing as many as eight syllabic divisions, nʸú·ni·šumasekačú?us *you (pl.) will recognize them*. Stress is a phonemic feature and all words, even if monosyllabic, contain an accented syllable. The appearance of two accented syllables in a single word is not of infrequent occurrence: (cf. example above); ?á·kó·m *Acoma*.

2.1. Sixteen consonantal phonemes appear in Keresan.

	Bilabial	Dental	Palatal	Velar	Glottal
Stops:	p	t	tʸ	k	?
Spirants:		s	š		h
Affricates:		c	č		
Nasals:	m	n	nʸ		
Semi-vowels:	w		y		
Trill:		r			

2.2. Stops, spirants, and affricates. All of the phonemes in these series are subject to some positional variation. Some range of variation is also present, arising from individual expression of phonemes, age, sex, or local affiliation.

All stops are voiceless. While aspiration occurs in stops in final position, in initial and medial positions they are unaspirated. Thus, for the phoneme p, pučináy *upstream*, nʸú·pes *I shall eat it*. But t, a voiceless dental stop, and tʸ, the palatalized equivalent, permit some phonetic variation in that both, particularly in the speech of older men and locally with marked frequency at the Pueblo of Santo Domingo, may be subject to a somewhat retroflexed and apical articulation (ṭ and ṭʸ). Thus, táwač *moon, month;*

ʔó·ta·nʸ *ceremonial basket;* tʸú·m *brother;* šú·watʸáʔm *witch doctor.* The phoneme k, normally in initial and medial positions a velar stop, permits a phonetic variation between an unaspirated and unglottalized sound to an aspirated and strongly glottalized form as in kamaʔénʸ *it is funny* and rí·wakánʸ *he is fat.* Heavy glottalization of the velar stop is a feature that seems, in males, to become emphasized with age and tends to be locally somewhat more characteristic of Santo Domingo and Cochiti. Glottal stops, recognizable as a single phoneme, ʔ-, appear in several phonetic contexts. Whether as a member of a consonant cluster or as an intervocalic consonant, the glottal stop ranges from almost inaudible, as when uttered by young women and children, to a heavy and even violently formed articulation. Examples are: ʔaytʸikúyan *they left it there;* cá·ʔaštim *grinding stone.*

All consonants in final position are subject to a marked release; stops are markedly aspirated. The aspiration, which regularly follows the articulation of the final stop, may be accompanied by a heavy glottalization. Examples are: tapúp *war leader;* samí·t *maize bread;* kánatʸ *witch;* káwayk *lake, Laguna;* tí·ʔ *dog.* The release of consonants in terminal positions is in no way affected by the preceding sounds nor by the initial phonemes in words which follow. The non-English speaking Keres give this feature greater emphasis than do those brought into contact with English in Indian Service schools. It is of interest to note that Spanish phonemes adjust to the Keresan phonemic pattern more readily among those Indians who do not speak English with ease. Cf. Sp. pared > Ker. paré·t *wall.* The final stops of English, however, tend to modify the Keresan final stops among English speaking natives, causing a much less heavy articulation and a feature analogous to the release of final stops in such English words as *sit, tap, back.*

The spirants, s, š, and h, like the stops, are subject to some phonetic variations and to the same characteristic heavy release in final position; those in initial and medial positions are fairly constant.

The phoneme s is a voiceless dental sibilant, considerably more protracted than the English equivalent and analogous to the ss of the word *hiss.* This phoneme is fairly stable, allophonic differences arising only under apparent English influence. Native Keresan emphasizes the continuant, a feature somewhat modified by English-Keresan bilinguals: sú·tʸim *I accompanied him;* ʔaysenasikúy *I set it down* (large, bulky object). The phonetic character of this phoneme remains constant when it appears as the initial member of a consonant cluster as in stʸá·puk *afternoon.* s occurs in final position with a heavily aspirated release: cúʔus *I went* [cúʔusʰᵉ].

The phoneme š, a voiceless grooved continuant produced in alveo-palatal position before an unstressed vowel, varies somewhat under the influence of a following accented vowel. Before the stress, regardless of the quantity of the following vowel, š takes on a somewhat retroflexed character, the point of articulation falling back to the mid-palate. The grooved aspect of the phoneme is retained in such cases and causes an audible trill, a matter which has given rise to some difficulty in phonetic transcriptions. This feature is not apparent before unaccented vowels or if š is the initial member of a consonant cluster. The following may be compared: šá·wit *parrot,* but šaʔák *pipe, intestine* [šʳá·witʰᵉ], [šaʔákʰᵉ]; šéʔ *and it was;* wí·šunʸ *face;* ha·šúwim *mocassin* [šʳéʔᵉʰ], [wí·ⁱšunʸ], [ha·šʳúwimᵉ]. The retroflex character of the sound is retained when it appears in final position in which case the release again takes the form of a heavy aspiration following the articulation of the spirant: kaywá·tiš *he is afraid* [kʔaiwáᵃ·ᵗdišʳᵊʰ].

The phoneme h is a voiceless fortis glottal spirant, a clearly audible aspiration subject to no marked range of phonetic variation. In initial position h is of frequent occurrence

as in hustʸá·k *bow*, hanašiyénʸ *it is dangerous*. In medial positions, however, h as a separate phoneme is rather rare and is subject to a series of morphophonemic variations: in words incorporated by a process of simple agglutination, the phoneme h may be retained in medial position as in tʸitʸihá·nam *northeast*, < tʸitʸá·m *north* (*place*), and há·nam *east* (*place*). More frequently, h is syncopated if preceded in initial position by a prefix: hayá·ʔačanʸ *teeth* > seyá·ʔač *my teeth;* há·m *tobacco* > saʔá·m *his tobacco*. Medial h appears in some words quite regularly without variation when it precedes a stressed vowel: kuháy *bear*, sayhém *all* (animals and things). h does not occur in final position in words.

The affricates c and č are subject to the same rules which govern the pronunciation of the spirants s and š.

The phoneme c is a voiceless dental affricate (ts) which varies in individual expression to a voiceless alveolar affricate. In the latter form, it is more characteristic of those Keres who speak no English. For initial and medial position: cí·sip *eyelash*; picút *hawk*. A heavily aspirated release characterizes this sound in word-final position: háʔac *earth;* há·čc *old man*.

The phoneme č is produced in alveopalatal position if it precedes an unaccented vowel. Like š, it retains a voiceless character. Under the influence of a following stressed vowel, or in word-final position, the point of articulation falls back to the midpalate, giving rise to an audible trill. Compare: yá·činʸ *shelled maize*, hó·wičán *cornstalk* [yá·činʸ], [hó·ʷwičʳán^{e}]; tʸi·náwtakutʸitisúč *the two of us raised it* (round standing object). As the initial member of a consonant cluster, the č affricate is not retroflexed: ʔa·čičtʸáʔn *at the edge of*. When č is the final member of a consonant cluster, its pronunciation is governed by the following vowel, which, if accented, causes retroflexion of the affricate: kaʔačenicčéʔnʸ *he danced frequently*. Preceding a stressed vowel, č and š are given a midpalatal articulation but older speakers may draw the point of articulation back to the velum. The trill effect in both cases is most apparent before a high rounded back vowel ú or ú· as in čúʔuwič *he changed it;* šú·w *serpent*. It is present, however, in all stressed vocalic contexts.

Boas makes a distinction between TC and TCᴵ, remarking of the latter that in the old forms the TCᴵ (čʳ) may be replaced by a "true mid-palatal dorsal r."[3] As an example, ocá·tc' *sun* (ʔošá·č), older form, ocára, is given.

2.3. Nasals appear in: múšeš *bison;* tó·miš *woven cloth;* ná·y *mother* (female relative in first ascending generation); siná? *cloud;* nʸu·mí·c *I shall probably run away;* ʔa·có·nʸatʸ *will he go there?* The nasals in word-final positions are subject to an audible release. The voiced character of these sounds causes the release in this position to assume a vocalic character, usually in the form of a non-phonemic shwa plus aspiration in the cases of m and n. This may be heard in ká·m *he dwells* [kʔáᵃ·mᵉ⁽ʰ⁾]; tʸa·n *deer* [tʸá·ᵃnᵉ⁽ʰ⁾]. The palatalization of nʸ normally causes the occurrence of a non-phonemic yodh following the final release, an audible vowel which in turn is subject to aspiration: hamaští·nʸ [hamašɒí·ⁱnʸⁱʰ] *hand;* ha·čéʔnʸ [ha·čʳéʔnʸⁱʰ] *hair*. Some phonetic variation occurs in nasals in word-final position since there may be a range from a whispered release to one which is clearly voiced. A large proportion of Keresan words terminate in nasal consonants.

2.4. The semi-vowels w and y have both a consonantal and vocalic value.

As consonants, the semi-vowels appear initially in words, in intervocalic, and in word-final position. nʸu·wá·nik *he will kill him;* wa·púnʸ *shell;* yú·špinʸ *shoulder;* nuʔuyú·tek *he is singing*. In word-final position, w and y are released audibly and with a following aspiration as are other consonants: má·šaw *vulture;* ká·y *inside it.*

[3] loc. cit.

Both semi-vowels are strongly voiced; w is a rounded bilabial, y a palatal vocoid. Final w and y are without exception consonantal.

The semi-vowels occur in vocalic form as initial members of consonant clusters, following only a, a·, á, and á·; they are not treated as vowels and are not syllabic. Nor do they, in such cases, bear stress. Thus yawšá·tʸ *sand;* naháyk *then, at that time;* háwp *everyone.* Following any other vowel besides the a series the semi-vowels remain consonantal.

2.5. The trill r is a voiced retroflexed alveolar flap, alveolar retroflexion imparting a lateral quality. An l sound is sometimes heard. r is rather rare in Keresan, appearing mainly in the numerous loan-words of Spanish origin. In modified borrowing, however, the Spanish trilled r is completely eclipsed by this sound although the Spanish r is usually retained when this language is spoken by a native Keres. Like other consonants, r may appear in the three positions in the word: initially, as in rú·cič *it is small;* rá·wa *it is good* (Cochiti and Santo Domingo, but Laguna and Acoma tá·wa); medially, ʔó·caram *it is bad;* stʸa·ró*r acorns,* (< *stʸá·r(u) *an acorn,* by reduplication); finally, as in ká·mar *lizard;* kašá·r *Koshare,* a clown society. In final position, the trill is released with an aspiration following in the same manner described for other consonants.

Modified Spanish loan-words show the greatest frequency of the trill. It appears variously in such words as kaští·r (Sp.) *castellano,* Keresan meaning, *Mexican;* ʔasoká·r (Sp.) *azúcar, sugar;* rurás (Sp..) *durazno, peach.* r may substitute for Spanish l as in ri·štó·n for Spanish *listón, ribbon;* ʔarawaké·k *Albuquerque.*

The false trill obtained in the articulation of the spirants and affricate described above as occurring in certain contexts is the same sound but is unflapped. It is to be emphasized, however, that the native r is never the member of a consonant cluster. Its lateral quality in pre-vocalic position would appear to justify its position as a separate phoneme.

3. Consonants, with the exception of h, occur regularly in the several positions in words. Quite uniformly, all consonants occur in word initial, medial and final positions. In the majority of cases, consonants are not clustered but occur as pre-vocalic in initial position, intervocalic in medial, and post-vocalic in final position. The most frequent syllabic combination is the grouping CV in word initial and medial positions, since the vowels themselves, although syllabic, never occur alone as separate syllables. Depending on word position, a number of syllabic possibilities arise. The following combinations appear in initial and medial positions: CV: ká·/tʸe/kuy *he was weeping;* CCV: škú·/cip *I wanted it.*

The combination CVC may occur in all three positions in a word: yú·/kuc/kuy *he became separated from them.* The same is true of the combination CCVC: stʸú·č/šuš *I will (not) be afraid.*

All final syllables are closed, since vowels do not occur in final position. It follows that all monosyllabic words are closed syllables and admit the following combinations. CVC: có·tʸ *he went;* CCVC: škáč *toad;* CVCC: só·šk *foxskin;* CCVCC škóʔn (particle of negation; cf. cá·c nʸú·ton škóʔn *I don't know*).

In initial and final positions, consonant clusters occur in single syllables. In medial positions, however, consonants forming clusters are subject to division into separate syllables: ʔiš/tú·ʔ *arrow;* yaš/po/čónʸ *brains;* ha·s/tiš/čáš *seat.*

Consonant clusters are regularly biconsonantal. The only circumstances under which a triconsonantal cluster may arise involve the semi-vowels w or y as the initial member of the cluster, these sounds in such cases possessing a vocalic, rather than a consonantal character.

Initial positions in words offer the following consonant cluster combinations, sp, šp,

št, stʸ, štʸ, and šk: sp spí·nin *it is sweet*, šp špó·n *water bottle*, št šti·pá·k *he is asleep*, stʸ stʸáyn *pelt*, štʸ štʸú·himatʸét *he is credulous*, šk škú·min *I answer you (singular)*.

The following consonant clusters occur in medial positions: šč wiščikú?nʸ *beads*, šk hi·škáy *knife*, št haʔaštínʸ *knee*, sč hasčic *he is old*, štʸ ʔosiwaštʸáʔnʸ *rope*, stʸ hustʸá·k *bow*, šp yú·špinʸ *shoulder*, čč ciná·ččáʔnʸ *storm arising*, ck nʸú·čanickuy *he will make it so*, čš cičšúw *watersnake*, čtʸ kokečtʸúšt *he thought so*, čš siyúčšuš *be not afraid*.

To these may be added clusters which arise when the semi-vowels appear before any consonant; w and y in such cases follows the vowel, a. The semi-vowels may also precede a pure consonantal cluster, giving rise to the following triconsonantal cluster combinations: ʔaystʸá·w *they were housed there;* nayščí·y *father*; sáwstʸat *I have killed them many times*. The semi-vowels in such cases are regarded as vowels, the syllabic division occurring as follows: ʔays/tʸá·w; nayš/čí·y; sáws/tʸat. Such triconsonantal combinations are rare and do not occur in word-final position.

A distinctive terminal cluster is the combination short stressed vowel plus glottal stop plus nasal. Thus -ʔm, -ʔn, and -ʔnʸ are common clusters but they occur only in final position: ha·cóʔm *as long as;* wa·kúʔn *shirt*; kaʔawáʔnʸ *war*. Clusters of this type permit some phonetic variation. The inhabitants of Acoma, Laguna, and Zia, the southern group of Pueblos, prefer to avoid the glottal stop in this context and to lengthen the preceding short vowel. In these Pueblos one hears fairly regularly: ha·có·m; kaʔawá·nʸ. In such cases the rule given below which governs the extra-lengthening of vowels in certain circumstances applies.

Other consonant clusters in final position are: šp wí·šp *cigarette*, št má·ʔašt *fox*, stʸ rukášestʸ *cloth*, štʸ kaʔá·tištʸ *turquoise mosaic*, šk kánašk *his head*, šc tiʔiwapúšc *he smelled it*, sč sá·sč *my foot*, ct siyu·páʔict *I struck him*, ck káck *perhaps*, cc hácc *almost*, čtʸ caʔá·čtʸ *he chased it*, čk nawtiyá·čk *he is getting married*, čs tu·yá·tičs *he threw things at him*, čc há·čc *old man*, cč nʸi·sácč *You (sing.) will be strong*.

To this set of clusters may be added those which arise when w or y is the initial member of the consonantal grouping following the a vowels, as in háwp *everyone*; káyk *would that, if*. Triconsonantal clusters, fronted as those in medial positions by semi-vowels, do not occur in final position.

4. Vowels in Keresan are syllable-nucleus phonemes but vowels do not occur as independent syllabic entities. The language presents a basic five vowel system in which two types of variation may occur: variants arising from differences in vowel quantity; phonetic variations which depend on the effect of the following consonant.

	Central (Unrounded)	Back (Rounded)
High	i	u
Mid	e	o
Low	a	

In the speech of the non-English speaking Keres, no fronted vowels are heard. The effect of daily or frequent use of English is to cause the vowels i and e to be heard as high and mid fronted vowels respectively. It has been noted with respect to the consonantal forms that the unilingual native speaker (i.e. non-English-speaking) tends to affect a more recessive and somewhat retroflexed point of articulation for certain consonants than do those whose contact with Euro-American culture has been more marked. The same point may be made with respect to vowel pronunciation. It is of interest to note, however, that Spanish spoken by native Keres, rather than affecting the native language, has been brought under the influence of native pronunciation.

While Keresan vowels may be treated from the point of view of the differences in quantity they exhibit, short and long vowels do not constitute separate phonemes. A phoneme of length (·) may be recognized which in turn is subject to two variations: it

appears with lengthened vowels and under certain circumstances, with lengthened and rearticulated vowels. The long vowel may be schematically represented as greater than the short vowel by a half mora, the long rearticulated vowel as greater by a whole mora. The long vowels may thus be recognized as of two types but the appearance of both in words is subject to special limitations.

In word initial and medial positions, short vowels may occur in both open and closed syllables: ká/nam *beans;* haš/ká?nʸ *bone.* In the same positions, however, long vowels occur only in open syllables: kú/caˑ/maš *he buried it;* yaˑ/se/?e/tʸú?m *kidney.* Either short or long vowels may occur in a final syllable or in a monosyllabic word: ?o/pó/noc *needle;* maˑ/yáˑn *good magician, Holy Ghost;* nút *prairie dog;* síˑtʸ *squirrel.* Final syllables are always closed since no word may terminate in a vowel. The occurrence of long vowels in open syllables in initial and medial positions would indicate that they do not differ from the short vowels in phonemic quality. Differences in vowel length are not determined by consonants or consonant clusters which follow.

The extra-long or rearticulated vowel appears in words only if the vowel is normally long and bears a stress. Thus long vowels in initial and medial positions are rearticulated when stressed. In a stressed final syllable or in monosyllabic words the long vowel is also rearticulated. The rearticulation takes the following forms: íˑ, áˑ, and úˑ reduplicate themselves in the form of a short vocalic glide following the articulation of the long vowel. Examples are: ?íˑyatik *Corn Mother* (n. pr. myth.) [?íˑⁱyaɒikᵒʰ]; háˑčeš *husband* [háˑᵃčešʳᵒʰ]; kúˑpišt *pantheon* [ʁʔúˑᵘɒištᵒʰ]. Rearticulated éˑ and óˑ do not reduplicate but assume the quality of the higher corresponding vowel. Thus éˑ, under the circumstances described, becomes in pronunciation éˑⁱ, as in ?éˑčac *he said thus;* óˑ is pronounced as óˑᵘ, as in hóˑčanʸ *chief.* The impurity of éˑ and óˑ in rearticulated form is retained in final syllables containing the stressed long forms of these vowels and in monosyllables. Long stressed íˑ, áˑ, and úˑ also are rearticulated in final syllables and in monosyllabic words: tʸíˑn *zenith;* tʸéˑc *rabbit;* máˑm *very much so;* kóˑw *woman;* múˑs *cat.* The rearticulation of such long vowels takes place as described before all consonants except ?-. Here the stressed long vowel regularly retains its length but lacks the rearticulated extra-lengthening: heˑyáˑ?aš *mist;* ?- preceding the long stressed vowel does not halt rearticulation: kaʔáˑč *kiva.*

4.2. Vowels followed by the nasal consonants m, n, and nʸ may be nasalized. The degree of nasalization in such cases appears to be a more or less arbitrary feature. It may be barely perceptible or it may be rather strongly marked. This feature is most apparent in final syllables where the nasal consonants stand in word-final position. Among some speakers, the final nasal consonant may be almost inaudible with a result that a heavily nasalized vowel is heard.

Vowels may be laryngealized under the following conditions: when they are preceded by the unaspirated velar stop k, if the individual speaker accords to the phoneme k a glottalized pronunciation (kúˑčk *fire*); if they follow a glottal stop (káˑ?aš *fishes*); when they precede the final consonant cluster consisting of short vowel plus ?- plus nasal consonant (?ánaškayšuštáˑ?nʸ *man's head band*).

The phoneme i, a high central unrounded vowel, is heard as a high back unrounded vowel (ī) before tʸ, nʸ, č, and after m and n. Boas describes this as follows: "... when accented it is liable to be heard as əγə, as in mītʸˤ *boy,* which is liable to be heard as məγətʸˤ."[4] The present writer renders this word as míˑtʸ *boy, son,* the vowel in this case being long and rearticulated in accord with the rules of stress. Other examples are: nʸinʸiˑ?inʸik *he is looking at it;* meˑcíč *it is long,* etc.

Some of the available transcriptions of Keresan sounds in ethnographic reports in-

[4] loc. cit.

dicate whispered vowels in word final position. It is clear that these are associated with the release of consonants in word final positions and that they do not constitute separate vocalic phonemes. Release of final consonants tends to be audibly vocalic but it is of such variable quality, ranging from a murmur or shwa to the vowel nearest the consonantal point of articulation, that it may be excluded as a separate phonemic feature.

4.3 Stress may be regarded as a separate phoneme. When a word bears two accents, neither takes priority. Stress is not subject to any applicable rule although this exception may be made: a short vowel preceding the cluster ?- plus nasal consonant always bears stress, regardless of other accented syllables in the same word: katʸá·čá?nʸ *design elements in weaving.*

Keresan is not a tonal language. A somewhat higher pitch is accorded the accented syllable in a word, a feature which may lend the language a tonal effect. This is a nonfunctional feature, however, and is a normal concomitant of stress. All stressed syllables, regardless of the quantity of the syllabic, are raised in pitch by approximately a minor third. This is again, however, a rather variable feature, being much less perceptible among those Keres who have acquired a facility in Spanish and English. In various intonations a somewhat wider interval may be heard.

Sentence intonation patterns show considerable variation and are in part closely linked with morphological factors.

THREE KIOWA TEXTS

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0. Introduction
1. The Udder-angry Travelers-off
2. Seyndey and the Coyote
3. Seyndey and the Mountain Ghosts

0. The following texts are from the late Delos K. Lonewolf and from his stepson, Paul McKenzie, both of them native speakers of Kiowa. The Kiowa Indian language is now spoken at and about Anadarko, Oklahoma; an earlier home may have been several hundred miles northwest: Mooney traced back Kiowa tribal history to occupancy of a part of the region of the headwaters of the Missouri River, in what is now the vicinity of the Yellowstone National Park. Kiowa stories have no definite titles, but for purpose of ready identification titles have been put on these.

1. The Udder-angry Travelers-off

'æ'ho·w''æe·'hey'dl nɑ̨' hæ·'tey^dl t'æ'p how'dlhey'dl. [*They-were-traveling-along and someone an-antelope killed.*] 'æ'pẹ·y'nẹ·y' nɰ̨ k'yæ'tæy'ki' tsæ'nhey'dl. [*They-were-butchering-it and the-chief came-up.*] t'æ'p pẹy'ndɯ·'dey' bǫ·'whey^dl gɯ' ɯ·'zæy^ 'ẹy'h·ɯ'hey'dl. [*The-antelope butchered he-saw and the-deer-udders he-took.*] nɰ̨'ki·'g^yæ' kɯ^dey' k'yæ 'tæy'ki' tsæ'nhey'dl gɯ' 'ɯ·'zæy^ khɰ̨·'i̯ɯ·'dey'. [*Then later the-other chief came-up and the-deer-udders he-wanted.*] nɰ̨' kɯ^dey' k'yæ'tæy'ki' "hɰ̨·'nẹy'," tǫ·'wnẹy^, hɰ̨'n 'ɰ̨·'nɰ̨^hey'dl. [*But the-other chief "no," he-said, not he-granted.*] nɰ̨' kɯ^dey': " 'ɯ'dey'p'gɯ' nɰ̨''ɰ̨^," tǫ·'wnẹy^. [*And the-other-one: "Half give-me," he-said.*] nɰ̨' kɯ'dey': "hɰ̨·'nẹy'," tǫ·'wnẹy^. [*And the-other-one "no," he said.*] nẹy'gɯ' i̯·'dey' sɰ̨''w·'dey'hyey'dl. [*And-already this-one was-angry.*] gɯ' hey'gɯ' 'ɰ̨'gɯ^dey' k'yæe·'hyow'p gɯ' mæe·'yo'wp te·y'phɯ' 'ẹ'ymtow^tɯ' gɯ' hey'gɯ' 'ẹy'mho·w'i̯æ'dlhey'dl. [*And now his-own men and women all he-gathered and now they-traveled-off apart.*]

'ɔ'hyɯ'gɯ' hæ'yæ' 'æ'bæ·'kyæ'dey'. [*Those-ones somewhere they-went.*] mɰ̨'n hæ'g^yæ' 'æ'i̯ɯ'. [*Maybe somewhere they-are-staying.*]'ɔ·'zæ'i̯ɯ·'how'p 'æe'n 'ẹ'ymkhɰ̨^mɰ̨'. [*The-udder-angry-travelers-off indeed they-are called.*] hæ·'gyæ' 'æ't^hɯ·'dey^ Kɯy'gu'. [*Somewhere there-are-staying Kiowas.*] 'o'wtey'hɯ·' gyæ'hẹy^tey'dɯ'. [*That-is-all that-there-is-to-the-story.*]

2. Seyndey and the Coyote

sẹy'ndey' 'æe·'hey^dl nɰ̨' tsæ·'gɯ ki·'dey^. [*Seyndey was-traveling-along and the-prairie-dogs were-encamped.*] hey'gɯ' ɯ'p'kɯ beyto·w'dɯ·' dey'ẹy'm 'ey'sæ't'de·y'dey^. [*Wherever there their-houses were they-sat-sunning-themselves.*] nẹygɯ' sẹy'ndey' tǫ·w'nẹy^, "hæe···', sẹy'gi̯·'dɰ̨'. [*Whereupon Seyndey said, "Hae···', nephews.*] hɰ̨'ndey' thæy'mẹy'dl bæ'ku·'yɯ'; ɯ'p'kɯ'thɯ'p hɰ̨'ngɯ' 'ẹy'myæy'gɰ̨'nmɰ̨' gɯ' gyæ'yæy'bæ''ædldæ'dɯ'. [*Seemingly lonely ye-sit; away-from-here others are-dancing and are-enjoying-themselves.*] hɰ̨'ndey' thæy'mẹy'dl bæ'ku·'yɯ'. [*Seemingly lonely ye-sit.*] bæ''æ·' nɰ̨' bey'yæy'gɰ̨'n; thæy'mẹy'dl bæ'ku·'yɯ'. [*Come-ye and let-us-dance-with-merriment; lonely ye-sit.*] bey'yæy'gɰ̨'n." [*Let-us-dance-with-merriment."*]

hey'gɯ' 'ey'tsǫ·'tsæe'ndɰ̨·'mẹ·y' tsæ·'gɯ'. [*Then they-came-running, the-prairie-dogs.*] "hæ·'tsow', hɯ' hey'gɯ' te·y' bæ'dɯ'?" tǫ·w'nẹy^ sẹy'ndey'. ["*Now, interrogative already all ye-are-here?" said Seyndey.*] "hɯ·', hey'gɯ' te·y' 'ey'dɯ'," 'ey'tǫ·w'nẹy^. ["*Yes, already all we-are-here," they-said.*]

" 'æe·'khow^, bæ't'khow'mɰ̨·'how'!" tǫ·w'nẹy^, "nẹy' hey'tɯ'gu·' 'æ'bæ·'t'ɯ' kɯ^dl pɯ'dlkhɯ^thǫy' dey't'æ'dltɯ'," gɯ'

hey'gω' gyæ''æy^hyey'dl. [*"Now, be-ye-ready! he-said, "but wait-ye, I-have-to-go, you-know, a-drumstick I-shall-cut," and thereupon he-went.*] hey'gω' 'ω'k'kω' bey't'to·w'dφ·'męy^dey''ęy'm bey't'tæ·'dey^. [*Now there wherever-their-homes-were they-were-staying.*] hey'gω' tsæ'nhey'dl gω' 'æ·'thǫy' 'ey'do·w'dey^, gω' hey'gω' 'ey'kω'dæ'dlphφ·'dω·'pey'hey'dl. [*Now he-returned and a-drumstick he-had, and now he-had-them-stand-in-a-circle.*]

"bæ'kω'dæ'dlphφ·'," tǫ·wnęy^, nęy'gω' 'ey'kω'dæ'dlphφ·'hey'dl. ["*Stand-ye-in-a-circle," he-said, now they-stood-in-a-circle.*] syφ'nhey'dldey' hey'gω' 'o·w' hǫw'nphφ'yhey'dl. [*The-smallest-one now then he-placed-at-the-end.*] "'æ·'khow^," tǫ·w'nęy^, "dey'dω·'pæy^dey'tω' nφ' hey'gω' bey'gu^n. ["*Now," he-said, "when-I-sing then already ye-must-dance.*] hey'gω' 'ω'p'kω' bæ'de·y'dey''ęy'm bey'gu^n. [*Wherever there ye-are-standing dance-ye.*] hey'gω' dey'dω·'p'æy^dey'tω' nφ' hey'gω' 'ωphω·' bey'gu^n — 'ω'p'kω' bæ'de·y'yω'dey''ęy'm." [*Now when-I-start-singing, then already there dance-ye—there where-ye-are-standing."*]

'æ·'khow^, 'ω·'gω' 'ęy'mdω·'tω''æ·'hey'dldey'tsow' hey'gω' t'ω'k'kω't 'ey'gu^'æ·'hey'dl. [*Now, he while-he-was-singing already over-the-head he-had-been-hitting-them.*] k'æ''ǫw'mφy^ hǫw'nde·y'de·y' dey'bey't·hω·' gyæ'tæ''ætsǫ'tω·'be·y'. [*Little-One standing-at-the-end in-the-meantime had-been-squint-watching.*] hey'gω' sęy'ndey' ku^hae·' phey'hey'dl nęy'gω' tęy'mbω·'dey'hyey'dl. [*Now Seyndey was-going-to-hit-him when he-scampered-off.*] nęy'gω' gu^hey'dl gω' go·w'bey'hyey'dl. [*Now he-struck-at-him, but he-missed-him.*]

"gφ'!" tǫ·'nęy^, "hφ'ndey' tsęy'ntow'dlφ·'gω'! ["*Go!" he-said, "something palatable!*"] "gφ'! gφ'!" ["*Go! go!*"] nφ' khow'dey^dey' sǫw'ndǫ·w'gey' bey't·hω·' gyæ'thæ^dldφ·'mę·y'dey''ęy''ęy'mgu'nhey'dl. [*And suddenly in-the-grass in-the-meantime where-there-was-a-hole he-entered.*] "hæ···'; hφ'ndey' tsęy'ntow'dlφ·'gω'!" poy' 'ωy^ tǫ·w'nę·y'. [*Hæ···'; something palatable!" now again he-said.*] "nęy' hæ·'tsow''æ'dl; guy^gω' ki''æ·'bω' hey'gω' 'ey't'bǫ·w'nyi^tω·' tsæ·'gω'. ["*But why-care; posthumous people still will-be-seeing prairie-dogs.*]

'æ·'khow^, hey'gω' 'ey'tow^tey'hyey'dl gω' 'ey'hi·'hey'dl, gω' hey'gω' 'ey'ki·'ku·'hey'dl. [*Now, then he-gathered-them-together and he-carried-them, and now he-built-a-fire.*] hey'gω' 'ey'tsęy'nω·'they'psω·'hey'dl. [*Now he-put-them-under-hot-coals.*] hey'gω' 'ęy'msω·'hey'dl gω' hφ'ndow' tǫw'hey^dl nφ' 'o·w'dey^ mφ·'thǫw'tsǫ·w'hi' 'æ·'hey^dl. [*Then he-sat-down and by-chance glanced-up and there the-coyote was-coming-along.*] thǫ·w'dey' 'æ'hφ'ndey' kω'dlkow'p'te·y', gω' 'ey'hyęy'mde'y'æ·'hey'dl. [*His-leg with-some-sticky-substance was-covered, and he-was-limping.*]

sęy'ndey' tǫ·w'nęy^, "'ąe···', bey'hyę·y'dey'!" [*Seyndey said, "'ąe···', go-away!*"]

nφ' mφ·'thǫw'tsǫ·w'hi' tǫ·w'nęy, "hφ'ndey' thǫ·w'sey' bæ'tgu'ntω·' nφ' gætzęy'mts'æ^dlyi·'tω'." [*But the-coyote said, "Whatever bones you-discard then I-shall-gnaw-on."*]

"nφ' bey'hę·y'dey'! ["*But go-away!*] 'ǫ·'gω' 'æ'khω''φ'n nęy' gæ't.hęy'mbæ'sæ't." [*Myself poor now I-provided-for-myself."*]

tso'dlhω·' hæ''ow'tey't'tow' thę·y'dædω·'pey'hyey'dl. [*Thus several-times he-requested-him-to-leave.*]

"hφ'ndey' thǫ·w'sey' bæ't'gu'ntω·', nφ' gyæ'tzęy'mts'æ^dlyi·'tω·'," poy' 'ωy^ tǫ·w'nę·y' mφ·'thǫw'tsǫ·w'hi'. ["*Whatever bones you-discard, I shall-gnaw-on," now again said the-coyote.*]

nęy'gω' sęy'ndey' tǫ·w'nęy^, "nφ' 'æ·'khow^; bey'ts'æ'ndey'. [*Then Seyndey said, "Now what-do-you-say let-us-race.*] hæ'gæy^ bey'tho·w'dey'tω·' gω' hey'gω' bey't.hæ^n." [*Whoever wins them then will-eat-them."*]

mφ·'thǫw'tsǫ·w'hi' tǫ·w'nęy^, "thǫ·w'dey' 'ęy'khow'p; hæ^bæ' ts'æ'ngyæ'tsow' 'æ'dω'." [*The-coyote said, "My leg is-paining-me; in-anything but-a-racing-condition I-am."*]

nǫ̀ sɛ́y'ndey' tǫ́·w'nɛ́yᵃ, "nǫ̀ ts'o·w' 'ǫ́nkɔ́yᵃ gyæ't.hæ't'phǽey'tɔ́'." [*But Seyndey said, "But a-stone on-my-ankle I-shall-tie."*]

"nǫ̀' hæ''oy' bæ't.'æy'?" tǫ́·w'nɛ́yᵃ mǫ́·'thǫ́w'tsǫ́·whį'. ["*But how-far shall-we-go?" said the-coyote.*]

"nǫ̀' 'ɛ́·y'hɔ́·' hey'gɔ́' bæ't.'æy' gɔ́' 'o·w'pe' yi·'kyæ' pi·'gɔ́' 'ɛ́y'mbæ khoy'dey'. ["*Well right-there now we-shall-start and there-along 4 hills we-shall-go turningly.*] hæ'gyǽyᵃ bæ't'æ'mtsæ'nt'ɔ́·' gi'gɔ́' bey't.hæᵃn," tǫ́·w'nɛ́yᵃ sɛ́y'ndey'. [*Whoever arrives-ahead then will-eat-them-up," said Seyndey.*]

nǫ̀' mɔ́·'thǫ́w'tsǫ́·w'hį' tǫ́·w'nɛ́yᵃ, "hæ·' thǫ́·w'dey' 'ɛ́y'khow'p nɛ́y' bæ't'khow''æy'." [*And the-coyote said, "Hæ·', my-leg is-paining-me, but let's-do-start."*]

hey'gɔ́' 'ɛ́y'nmǫ́·'how'dlhey'dl nɛ́y'gɔ́' sɛ́y'ndey' to·w'nɛ́yᵃ, 'æ·'khowᵃ! bæ't'khow''æy'," nǫ̀' hey'gɔ́' 'ɛ́yhæ·'pey'hyey'dl. [*Then they-go-ready and Seyndey said, "Now, let-us-start," and now they-started.*]

sɛ́y'ndey' hæ'bey' gǫ́wᵃm gɔ́'bǫ́·w'heyᵃdl nǫ̀' mǫ́·'thǫ́w'tsǫ́·w'hį' 'o·w'deyᵃ thǫ́·w'dey' 'ǫ́'mǫ́·'hey'dl k̨ɔ́'t 'æ·'yæ'hæ·'pey''æ'·hey'dl. [*Seyndey at-one-time back glanced and the-coyote there his-leg hurt from-time-to-time he-was-carrying-it.*] sɛ́y'ndey' hey'gɔ́' phi·'gu'p ko·w'beyhyey'dl, nǫ̀' mǫ́·'thǫ́w'tsǫ́·w'hį' hæ·''oy' bɔ́·'dey'hyey'dl phi·'yɔᵃ. [*Seyndey then over-the-hill disappeared, and the-coyote finally appeared over-the-hill.*] tǫ́w'heyᵃdl nǫ̀' sɛ́y'ndey' hey'gɔ́' yɔ́'gu't'phi·'guy' ko·w'bey'hyey'dl, nǫ̀' hey'gɔ́' 'ǫ́nt̨ey'p tɛ́y'mbɔ́·'dey'hyey'dl—

'æ'mhǫ́'ndey'thǫ́·w'khow'p.hį́ᵃyį́·'dey'.

[*Looked now Seyndey now over-the-second-hill he-looked-back, and already turntail he-had-disappeared—the-one-whose-leg was-supposed to-be-paining.*] nǫ̀' sɛ́y'ndey' 'ǫgɔ́'dlthɔ́·'dey' phi·'yɔ́·' p'e·y'dey'hyey'dl gɔ́' tǫ́w'heyᵃdl nǫ̀' mǫ́·'thow'tsǫ́·w'hį' hey'gɔ́' 'ɔp'kɔ́'thɔ́'p 'ǫ́'nt̨ey'p k̨ǫ́wᵃmp'æ·'dædɔ́·'hi·'hey'dl. [*Then Seyndey over-the-next hill appeared and looked and the-coyote now away turntail was-going-as-fast - as - he - could.*] sɛ́y'ndey' 'ɛ́y'mki·''ɔthæ·'dey'hyey'dl, "Hæ· · · ·'! 'ɛ́y'm'ɔ́·'phǫ́'!; ts'o·w' 'ǫ́'nkɔ́yᵃ gyæ'tyæ'dltɔ́'." [*Seyndey hollered, "Hæ···'! Stop-a-while! the-stone on-my-ankle I-shall-untie."*]

nǫ̀' mǫ́·'thǫ́w'tsǫ́·w'hį' hey'gɔ́' thǫ́w'gɔ́·' tsæ'nhey'dl 'ɔ́·'gɔ́' tsæ·'gɔ́' 'ey'tsɛ́y'nǫ́·'they'psɔ́·'dey'dey''ɛ́y', gɔ́' hey'gɔ́' 'ey'khuᵃdlhey'dl gɔ́' 'æ'pɔ́·'dleyᵃ tsǽy'mɛ́y'dl. [*Now the-coyote already there had-arrived himself the-prairie-dogs where-they-were-in-the-hot-coals there, and now pulling-them-out then he-was-eating-them hurriedly.*] te·y'phɔ́wy' 'ey'hǽnhey'dl. [*All he-ate-up.*] thǫ́.w'sey' hey'gɔ́' gyæ''ɔ́yᵃɔ́·'they'psɔ́·'hey'dl, gɔ́' hey'gɔ́' gyæ''æ yᵃhyey'dl. [*The-bones then he-replaced-in-the-hot-coals and then he-went-his-way.*]

sɛ́y'ndey' hey'gɔ́' tsæ'nhey'dl. [*Seyndey then arrived.*] "Hæ· · ·, hey'gɔ́' mǫ́'n 'ey'tsɛ́y'ndɔ́'," tǫ́·w'nɛ́yᵃ dey'tsow' pæ·' khuᵃdlhey'dl, nǫ̀' thǫ́·w'sey'gɔ́'ki' 'ey'dǫ́·'meyᵃ! [*Hæ· · ·, already surely they-must-be-cooked," he-said also one he-pulled-out, but only-a-bone it-was!*] "hey'gɔ́' 'ey'tsɛ́y'ndɔ́'," poy' 'ɔ́yᵃ tǫ́·w'hey'dl. ["*Already they-are-done," now again he-said.*] cruyᵃkɔ́' thǫ́·w'sey'bɔ́' poy' 'ey'khuᵃdlhey'dl gɔ́' tǫ́·w'nɛ́yᵃ, "tsɛ́y'ndæ'dey't!" ["*Tsɛ́y'ndæ'dey't!*"] poy' guyᵃkɔ́' 'ey' khuᵃdlhey'dl gɔ́' poy', "tsɛ́y'ndæ'dey't!" [*Now another-one he-pulled-out and now, "Tsɛ́y'ndæ'dey't!"*] 'ɛ́yᵃ tǫ́·w'hey'dl. [*Again he said-it.*] "cryæ'tsɛ́y'ndɔ́·' dow' ki·'hę́·y' gyæ'dɔ́·'," ǫ́·deyᵃ, bey't.hɔ́·' hey'gɔ́' mɔ́·'thǫ́w'tsǫ́·w'hį' te·y' tsæ·'gɔ́' 'ɔ́'thæᵃndǫ́·'me·y' gɔ́' thǫ́·w'sey' dey'ki' 'æ'n 'ɔ́·'they'psɔ́·'de·y'. ["*It-is-overdone for without-meat it-is," he-thought, not-knowing already the-coyote all the-prairie-dogs had-eaten-up and the-bones merely indeed had-left-buried-in-the-coals.*]

"hǫ́'ndey' kho·w'bey'dl 'ɛ́y''ǫ́·'mę́·y'," tǫ́·w'nɛ́yᵃ sɛ́y'ndey'. ["*Something dirty he-did-me," said Seyndey.*] 'ɛ́y'mhɔ́ᵃhey'dlgɔ́'. [*He-discovered-the-situation.*] "hǫ́'ndey' mǫ́'n 'ey'tsɛ́y'nt'ow'dlǫ́·'nǫ́'!" ["*Something surely so-palatable!*"]

hey'gɔ́' 'ɛ́y'mgɔ́' mǫ́·'thǫ́w'tsǫ́·w'hį' 'æ'nk̨ǫ́·''ǫ́·'ndǫ́·'mę́·y' nǫ̀' hey'gɔ́' sɛ́y'ndey'

'ᵩ'nhi·'hey'dl. [*Now thereabouts the-coyote left-his-greasy-tracks now already Seyndey was-tracking-him.*] 'ę·y'gω' 'ǫwhæ^ bow'p'-pey'dę·y'tso·w'de·y', gω' ko·w'dow' the·y'-de·y'. [*This-fellow there was-taking-a-belly-full-nap, and very asleep-he-was.*] sęy'ndey' hey'gω' de·y'dey^ gω' 'ᵩ'dey^, "hæ'yæ' gyæ'hæy''ᵩmtω·'?" [*Seyndey now stood and thought, "What shall-I-do-with-him?"*] hey'gω' ts'o·w' hω·'hey'dl gω' mᵩ·'ƙᵩ^n 'ω'sǫ·w'nęy^, gω' mᵩ·' tsǫ·w' 'ω''ᵩ'mhey^dl. [*Now a-stone he-picked-up, and his-nose he-began-to-file, and like an-awl he-made-it.*] "hyæ·^!" tǫ·w'-nęy^, "bey'hæ·^! bæ'bæ·' 'oy'gω' thǫ·w' dω·'-dey''ęy; bey'thǫ·w''ω·'kω'sᵩ'mbǫ·w'." ["*Hyæ·!*" *he-said, "get-up! let-us-go there the-water where-is; we-shall-look-at-ourselves-in-it."*]

nęy'gω' 'ęy'bæ·'hey'dl, 'ęy'nthǫ·''ω·'kω'sᵩ'-mbǫw'tω·'dey'pe·y'dow'. [*Now they-went, to look-at-themselves-in-the-water.*] nęy'gω' sęy'-ndey' tǫ·w'nęy^, "'æ·'khow^, 'æ'm bey'khow'-thǫ·w''ᵩ·'kω'sᵩ'mbǫ·w', nᵩ' hey'gω' nᵩ·' ƙi·'-gyæ'." [*Now Seyndey said, "Now, you look-at-yourself-in-the-water, and then I next."*] mᵩ·'thǫw'tsǫ·w'hį' hey'gω' dæ^dlbω·'dey'hyey'dl gω' 'ęy'mbǫ·w'hey^dl. [*The-coyote now stuck-out-his-full-head-over-the-water and saw-himself.*] 'ǫ·'gω' 'ęy'mpe·-y'hyey^dl gω' gǫ^m pe·y'ko·w'bey'hyey'dl. [*Himself he-frightened and backward fell.*[1]]

sęy'ndey' tsω^ tsæ·'gω' 'ey''ᵩ'mhey^dldey'-pe·y'dow', 'ę·y'hω·'' æ'dl hey'tω' kæ·'hį''ęy'm 'ey'sę·y'thąę'mdω', ƙω't 'ωy'gω·' thæ^dlgu' 'ey't'kω''ey't'gų'nmᵩ' mᵩ·' hωy^gω' hæ'gyæ' 'ey'ki'dldey''ęy' 'æ''ᵩ'mgyæ''ęy'. [*Seyndey thus to-the-prairie-dogs having-done, even-nowadays now toward-anyone they-are-suspicious, indeed there into-the-holes they-fleeing-enter us whenever close to-where-they-live one-gets.*] 'æ·'khow^, poy' 'ω·'gω' sęy'ndey' mᵩ·'thǫw'tsǫ·w'hį' mᵩ·'ƙᵩ^n 'ω'sǫ·w'hey^-dldey'pe·y'dow', 'ę·y'hω·''æ'dl hey'tω' mᵩ·'-ƙæ'n mᵩ·'thǫwtsǫ·w'hyow'p mᵩ·' tsǫ·w'gω' bey't'dω'. [*Now, now he, Seyndey, the-coyote his-nose filed-because, nowadays now noses of-coyotes like awls are.*]

[1] This is the idiom for saying that he fell dead.

tsω^ 'æ'n 'ęy'mthᵩ·'tey't'tω'. [*Thus indeed they-tell-the-story.*]

3. Seyndey and the Mountain Ghosts

sęy'ndey' 'æ·'hey^dl nᵩ' ƙow'psω'phow't'-tω' 'ey'bǫ·w'hey'dl gi'gω' 'ey''æ'dlhey'dl. [*Seyndey was-traveling-along and the-mountain-ghosts saw-him and pursued-him.*]

ƙow'psω'phow't'tω' ƙæ·'hį'tsow' 'ey^dᵩ·'-męy^ nęy' 'ey'phω'how'dlsω·'de·y'. [*The-mountain-ghosts like-people were but were-wooly.*] 'ɔ·'hį'sæ'n tæ'ntω'thæy' bey'ki''-æ·'-dᵩ·'mę·y' gω' bį'mkhωy'bį'n gyæ'phω'how'-dldᵩ·'mę·y'dey' 'ey'tmæ·'do·w'de·y. [*Small-cedars on-top-of-their-foreheads they-had-growing and large-bags which-were-wooly they-carried-on-their-backs.*] sąę^dω' to·w'-thow'p'kω' 'ey'tyæy''æy'hyey'dl ƙω't 'ey'p'-ωy'hyey'dl 'ę·y'hω'gω' ƙow'psω'phow't'tω' 'ey't'tęy^hyey'dl ƙω't 'ω'p'kω' ƙow'p'ku' 'ey'ki·'dey^dey''ęy'm 'æ'n 'ey't.'æ^hæ·'pe·y'. [*Children far-from-camp playing indeed getting-lost these mountain-ghosts would-catch indeed there in-the-mountains where-they-lived always carrying-away-in-bags.*]

tsω^ hey'gω' sęy'ndey' 'ey'tω·''æ·'hey'dl nω' hæ'bey' gǫw^m 'ęy'mgų'nhey'dl nᵩ' hey'gω' 'ey'kω·'tey''æ·'hey'dl. [*Thus now Seyndey being-pursued now somewhere backward he-glanced and already he-saw-that-they-were-coming-to-overtake-him.*] hæ^yæ' t'ω·'-t'ω·' gi'gω' phᵩ·'hey'dl nᵩ' bey'tę·y'gyæy'-hyey'dl. [*Where he-was now he-stopped and they-grabbed-him.*]

"'æ·', sęy'gį·'dǫw'!" tsæy'gω' tǫ·w·''hey'dl. ["'*æ·', nephews,*" *distressedly he-said.*] "nᵩ·'' æ'dl 'æ'n ƙyæ·'hyow'p dey'hæ^nmᵩ'; 'ω·'gω' 'æ'm'æ'dl 'æ'n bey'hąę^nę·y' dey'tsow'." ["*I-too always people eat; ye ye-too always eat-them, so-I-understand, also.*]

"bey''ω·'sω·' gω' bæ'hᵩ·'gu·'t'ω·' nᵩ' hey'-gω' 'ω·'gω' 'æ'kæ·'hį'dω' dey'bæ't'kᵩ'mtω', bow't nᵩ·''æ'dl ƙyæ·'hį'pį'·ƙi' 'æ dω'," tǫ·w'-nęy^. ["*Let-us-sit-down-for-a-while and get-our-breaths and then I what-kind-of-a-man-I-am shall-show-ye; because I-too a-man-eater am,*" *he-said.*] hey'gω' tsω^ 'æ''ᵩ'kow'p'-te·y' gω' 'æ'hᵩ·'gu·'hey'dl nęy'gω' sęy'ndey'

tǫ·w'nęy^, "'æ·'khow^, hey't te·y'phɯy' bey'-hi^tey'; kæ·'hį'k̄ɯ·'gyæ' zow'dlku' ku·yɯ' gɯ' 'ow'bɯy'k̄yæ·'hyow'p'æ'dɯ'—k̄æ·'hį'pį·'gɯ'." [*Now so they-sat when their-breaths-returned and Seyndey said, "Now, let-us all vomit; human-skin their-vomit having-in and real men are—people-eaters."*]

yɯ'gu'k'kɯ' hæ'gyæ' 'ey't'kæ·'hį'tsow't'tɯ' gɯ' hey'gɯ' 'ey''æ'dlǫ'mdey'hyey'dl, gi'gɯ' 'ey't.hi'te·y'. [*In-his-integrity something they-believed and now they-agreed, and they-vomited-up.*] sęy'ndey' 'ęy'mzow'dlǫ·'mę·y' k̄ɯ't hɯ'n 'ęy'mhi·tɯ^hey'dl, bow't k̄ǫw'mbæ''æ·dlgyæ' hǫ'næ'n gyæ''ǫ'mgɯ^. [*Seyndey to-make-himself-vomit indeed not could-not-effect, for imitation is-difficult to-effect.*] sɯ''ɯ'dlkyæ' mǫ'nhey'p'tey'hyey'dl gɯ' k̄ǫ^dɯ' dey'ki' mǫ·' guy^ bey't'ki·'hey'dl. [*Into-his-mouth he-thrust-his-fingers and wild-tomatoes only like vigorously poured-forth.*]

"æ·', sęy'gi·'dǫw'," tǫ·w'nęy^, hæ'bey' 'æ'n hǫ·'khu't'tey'hyey'dlgɯ'; "bey'tæ^pho·w'-bey'do·w'de·y' dey'tsow' bey'hi^ki·'; zow'-dlgyæ' gyæ'k̄ǫ·'dey'dow' hǫ'n gyæ'bǫ·w'-mǫ·'." ["*æ·', nephews,*" *he-said as indeed he-caught-his-breath "let-us-keep-our-eyes-closed while we-vomit; vomit being-unpleasant not should-be-seen."*]

'æ·'khow^, 'ɯ·'gɯ' ts'o·w''ow'bæ' 'ey'tzow'-dltæ·'pho·wbey'do·w'de·y' k̄ow'psɯ'phow't'-tɯ' nǫ' hey'gɯ' sęy'ndey' 'ɯ·'gɯ' 'ǫ·'gɯ^dey' k̄w·'dǫ'ɯ 'ɯ'dǫ·'męy^ gi'gɯ' tsow' bey't'k̄u·'-gų·'yį·' zow'dlku'. [*Now, they-themselves tightly their-eyes-closed the-mountain-ghosts now already Seyndey himself his-own wild-tomatoes what-had-been now so transferred to-other-vomit-heaps.*] 'æ·'khow^, 'ǫ^ngɯ' k̄æ·'-hį'k̄ɯ·'gyæ' bey'hæ^pe·y' k̄ɯ't 'ǫ'gɯ^dey' zow'dlkyæ' ku·'dley^. [*Now, also people's-skin he-picked-up indeed his-own to-vomit-heap he-placed.*] 'æ'n mǫ·'ho·w'gyæy'hyey'dl gi'gɯ' tǫ·w'nęy^, "bey'khow'tæ·'k̄ɯ'phey'dl!" [*Indeed when-he-was-ready now he-said, "Let-us-open-our-eyes!"*] nǫ' hey'gɯ' 'ey't'tæ·'-k̄ɯ'phey'dlhey'dl gɯ' hey'gɯ' hæ'gyæy^ zow'dlku' tæ·'gɯ' bey't.how't'gų^yį'. [*Now already they-opened-their-eyes and now there the-vomit-heaps everywhere looked-at.*]

pæ·' tǫ·w'nęy^, "hǫ'n kɯ^dl k̄ǫ^dɯ' hæ'gyæ' dey'mæ^hæ·'nǫ·' gɯ' 'ǫ^ngɯ' pæ·' zow'dlkyæ' nɯ' ku'dl." [*One said, "Not at-any-time wild-tomatoes at-all have-I-eaten and yet some in-my-vomit-heap and there-are."*]

"nǫ·''æ'dl pæ·'nǫ'k̄u'dl," tǫ·wnę^y guy^tey'. ["*I-too some have,*" *said another-one.*]

"gɯ' nǫ·''æ'dl!" pæ·''æ'dl tǫ.w'nęy^. ["*And I-too,*" *another-one said.*]

"'æ'næ'næ'næ'næ'næ'! ['*æ'næ'næ'næ'næ'-næ'!*] gɯ' nǫ·''æ'dl nǫ'k̄u'dl k̄ǫ^dɯ','' tǫ·w'nęy^ sęy'ndey; "yæ'dl k̄yæ·'hį'pį·'gɯ'k̄ǫ^n 'æ'pɯ't'-tɯ'!" [*And I-too have wild-tomatoes,*" *said Seyndey; "never people-eaters wild-tomatoes eat!*"]

hey'gɯ' k̄owpsɯ'phow't'tɯ' mį^n 'ey't.-hɯ^yi·' nęy'gɯ' sęy'ndey poy' hæ'yæ'tsow' ts'æ·'ntǫ·w'hey^dl! "'ɔ'gɯ'! "'oy'gɯ' k̄yæ'-kǫw^bɯ' pæ·' 'æ·'pɯ·'dæ·; hɯ' bæ·'t'tɯ·bæ', hǫ^? [*Now the-mountain-ghosts about to-catch-on-were when Seyndey now purposely said-to-distract-their-attention, "There! "Over-there people some are-making-smoke; interrogative do-ye-see-it, eh?*]

mǫ'n kɯ^dl hǫ'ngɯ' 'æ'ki'dl 'ɯy'hyɯ'. [*Perhaps indeed some-people are-living over-there.*] hey't 'ɯ'phɯ·' bæ't.'æy'!" [*Let-us over-there go!*"]

tsɯ^ sęy'ndey' tǫ·w'nęy^, nęy'gɯ' mǫ·' hæ'yæ'tsow' 'ey'tyæy" ǫ'mhey'dl, bow't 'æ'n to·w'dɯ' 'æ''ɯy'dey'bey't.hæy'gæ'dɯ·', gɯ' mǫ'n 'ey'ki·'t'ɯ'. [*So Seyndey said, but it-was-like with-something-else they-were-busying-themselves, for always that-camp to-be-well-populated-they-knew, and perhaps were-afraid.*] hǫ'n bey'tsæ·'thęy'ndǫ·'mǫ·'hey'dl nęy'gɯ' poy' sęy'ndey tǫ·w'nęy^, "hǫ'næ'n bæ'ki·'thæ·'mǫ·'hey'dl, hɯ'tǫw^m?" [*Not they-wanted-to-go, but now-again Seyndey said, "Never ye-are-afraid, isn't-it-so?*"]

"hɯ·', 'æ'n hæ'bey' nǫ·''æ'dl 'ey'ki·'thæ·'-mæ' gɯ' 'ɯy'hyɯ'dow' hǫ'n dɯ'tsæ·'thęy'-ndǫ·'mǫ·'," tǫ·w'nęy^ hæ'gæy^. ["*Yes, indeed sometimes we-too are-afraid and for-that-reason not we-want-to-go,*" *said one-of-them.*]

"hɯ·'," tǫ·w'nęy^ sęy'ndey', "nǫ' hey't thę·y'dɯ' bey't.'ɯ·'zǫwn; 'ɯy'hyɯ' hǫ'næ'n 'æ'ki·'thæ·'mǫ·'." ["*Yes,*" *said Seyndey,*

"now let-us our-hearts take-out-for-a-while; in-that-way never one-gets-scared."]

nęy·gω· 'ey''æ·dlφ·'mdey·hyey·dl gω· hey·gω· thę·y·'dω· te·y· 'ey·tzǫwnhey^dl gω· dω·'mgu· 'ey·t·'ku·'hey·dl. [*Now they-agreed and now their-hearts all they-took-out and on-the ground they-set-them-down.*] 'æ·'dǫ·w-gyæ· gyæ·dφ·'męy·. [*In-the-forest it-was.*] 'ɔ·'gω· hφ·'ngω· gyæ''æ·'pω·'dey^dey''ęy·m hey·gω· gyæ''æy·'hyey·dl. [*They some-people were-making-smoke-where now started-for.*] kωy·gu· mφ·'n 'æ·'dω· 'ω·'gω· 'æ·'ki·dey^gω·. [*Kiowas perhaps were they who-were-living-there.*] 'æ·'dω·''æ·'hey·dl nęy·gω· sęy·'ndey· 'ęy·'mts'æ·'nhǫw·'nφ·'mhey·dl —'ey·'hęy·-mdey''æ·'hey·dl. [*While-they-were-going already Seyndey was-feigning-getting-behind—he-was-limping.*] kω^gω· hey·gω· t'ow·'p.hį·' 'æ·''φmdey·'hyey·dl nęy·gω· sęy·'ndey· 'φ·'nt-'ey·'p 'ęy·'mkuy·'hyey·dl. [*The-others already far-ahead they-were-getting and Seyndey turn-tail started-back.*] 'ǫ·'nt'ey·'p dω·'hi·'hey·dl gω· 'ω·'gω· thę·y·'dω· 'ey''ω·'kow·'p·te·y·'dey·-'ę·y· tsæ·'nhey·dl. [*Turntail he-was-going and they their-hearts where-were-lying he-arrived.*] 'ǫ·'gω^dey· thęy·'n hæ^pey·'hyey·dl gω· 'φ·'gω^dey· ki·'dǫ·w·'gyæ· 'ωy· tse·y·-'hyey·dl. [*His-own heart he-picked-up and into-his body again he-put.*] gi·'gω· 'æ·'dω· 'ey·'pæ·'kæ·'hey·dl gω· 'ey·'hæ^pey·'hyey·dl gω· 'ωy·'hyω·'dow· pæ·' kow·'psω·'phow·'dlthęy·'n pi·'thω·'t·'tey·'hyey·dl. [*And a-stick pointed also he-picked-up and with-it a mountain-ghost-heart he-stabbed.*] hey·gω· tsω· se·y·-bey·'hyey·dl nęy·gω· 'ω·'p·'kω· kow·'psω·'phow·-t·'tω· 'ey·'dω·'hi·'hey·'dldey· hey·gω· pæ·' pe·y·-ko·w·'bey^hyey·dl, nφ· sω·'t 'oy^hyω·' 'ey·'t.hω^-hey·dl. [*As thus he-stabbed already over-there a-mountain-ghost falling-dead now some-of-them started-back, and now they became-aware.*] pæ·'hį·' hφ·'ndey· gǫw·'mgyæ· hæ·'-tsow· gyæ·'dω·'dey hey·gω· bey·'t.hæ y·'dey·'-hyey·dl gω· 'φnt'ey·'p 'ey·'t·'kǫw·'mp'æ·'dæ·-'æy·'hyey·dl 'ω·'gω· thę·y·'dω· bey·'t.ω·'kow·'-pte·y·'dey''ęy·m. [*Surely that-something back-there wrong was now they-realized and turntail they-came-back they they-hearts to-where-they-had-left.*] 'ey·'dω·''æ·'hey·dl dey·'-tsow· hæ·'gω^ 'æ·'n khow·'dey^dey· 'ey·'pe·y·'-ko·w·'bey^, mφ·'n hey·gω· sęy·'ndey· thę·y·'dω· bey·'t·'pi·'thω·'t·'kω·'dey''ęy·. [*They-were-coming-back and now indeed suddenly one-would-fall-dead surely now Seyndey a-heart when-he-stabbed.*] tsω^ 'ey·'kuy·'dey''æ·'hey·dl dey·'-tsow· 'ey''ω·'thφ·'nhi·'hey·dl. [*Thus they-were-falling-one-by-one and were-diminishing-in-number.*]

'æ·'khow^, 'ę·y·'gω· sęy·'ndey· 'æ·'dǫ·w·'gyæ· pω·'thæ·'hey·dl kω·'t, thę·y·'dω· 'ey·'go·w·'bey·'-gų·'yį·'. [*Now, this-fellow Seyndey in-the-forest was-eager indeed, the-hearts he-kept-missing.*] hæ·'gæ''æ·dl 'ey·'t·'khæy·'gų·'nę·y. [*From-place-to-place they-were-jumping.*] "gω·'! gω·'!", tǫ·wnęy^; kω·'t 'ey·'gow·'bey^, dey·'tsow· hey·'gω· kow·'osω·'phow·'t·'tω· 'ey·'tsæ·'ndey''æ·'hey·dl. ["*Gω·'! gω·'!*", *he-said; indeed he-kept-missing-them, and already the-mountain-ghosts were-gaining-ground-fast.*] pæ·'gω· thęy·'n 'æ·'to·w·'hey·dl dey·'kω·'gω· 'ω·'gω· hey·'gω· pæ·' kow·'psω·'-phow·'dl hǫw·'nto·w·'hey·'dldey· phi·'yω^ p·'e·y·'dey·'hyey·dl. [*One heart he-had-left when himself now a mountain-ghost the-last-one-of-them over-the-hill came-into-sight.*]

"gφ·'! gφ·!" to·w·'nęy^ sęy·'ndey· kω·'t thęy·'n go·w·'bey·'gų·'yį·'. ["*Gφ·'! gφ·'!*" *said Seyndey indeed the-heart missing.*] 'ɔ·'pæ·'dl kow·'-psω·'phow·'dl ·φ·'mdey·'æ·'hey·dl 'ω·'t hey·'tω· thęy·'n sęy·'ndey· 'æ·'go·w·'bey·'. [*Closer the-mountain-ghost got and still the-heart Seyndey missed.*] "gφ·'! gφ·'!" hey·'gω· 'æ·'mæ·'n 'ęy·'mmφ·'ngų·'nmφ· dey''ow''φ·'mdey·'hyey·'dl nφ· sω·'t 'oy^hyω·' 'æ·'gu·'pey·'hyey·dl nφ· kow·'psω·'phow·'dl 'ǫw·'hω^ phoy·'t·'ey·'dlæ·-dldæko·w·'bey·'hyey·'dl gω· bį·'mkhωy''æ·'dl 'ω·'t·'ω·'ku·'t·'tey·'hyey·'dl. ["*Gφ·'! gφ·'!*" *Now to-about an-arm's-length he-got before now his he-hit and the-mountain-ghost backwards sommersaulted and his-bag-too, got-flung-away.*]

tsω^ sęy·'ndey· 'φ·'gω khi·'bǫ·w·'hey^dl. [*In-this-way Seyndey himself saved.*]

SAPIR ON ARAPAHO[1]

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Edward Sapir left behind him a brief set of notes suggesting eastern cognates for some Arapaho words. In the Spring of 1939 Morris Swadesh turned these over to me to edit for possible publication. The material is undated, but internal evidence suggests that it was worked out prior to the appearance, in 1924, of Bloomfield's On the Sound System of Central Algonquian.[2] Sapir probably did not intend to publish these notes in anything like the form he finally left them in—if indeed he planned to publish them at all. For the record, however, publication in brief form is desirable.

I have reorganized the material somewhat, but have added practically nothing. The Arapaho words were apparently taken from Kroeber's various publications; I have, in Arapaho and the other languages, replaced ä, ', c, tc, and ts by ɛ, ʔ, š, č, and c respectively; the Arapaho transcriptions are otherwise unaltered, whereas in certain now well-understood Central Algonkian languages I have omitted diacritic indication of features known to be subphonemic and otherwise brought the writings into accord with modern Algonkianist practice.

Correspondences are given where possible in terms of Bloomfield's Primitive Central Algonkian reconstructions rather than by extended lists of forms from various Central Algonkian languages (Sapir had for the most part done the latter). PCA is the ancestor of Fox, Menomini, Ojibwa, Cree; Potawatomi;[3] and probably Shawnee; it is not, as now reconstructed, the ancestor of eastern Algonkian[4] nor of any of the plains languages. Therefore the entries are to be taken always as CORRESPONDENCES, never as ETYMOLOGIES.

The abbreviations are Sapir's, because in a couple of cases I am not sure of the meaning: Ar Arapaho, Oj Ojibwa, Aben(S) Abenaki (the "S" may stand for "Speck," indicating Sapir's source, or for "Southern," probably the former), Alg(S) Algonkin (an Ojibwa dialect; same comment on the "S"), C Cree, GV Gros Ventre, F Fox, Ch Cheyenne, Del Delaware, Mic Micmac, Bl Blackfoot.

1. Ar č-, PCA p-[5]: **1.** Ar čɛ·seix *one*, Oj peešik(w-), Aben(S) bazúkʷ, Alg(S) peešik, C peyak(w-).

2. Ar -t-, GV -t-, PCA -t-: **2.** Ar bɛtɛ *ten*, F metaaswi, GV beta·ⁿ, Ch mato-; **3.** Ar ni·setⁱ *one*, F nekoti; **4.** Ar ni·taⁿtaxʷ *six*, Oj ninkotwaaswi, Aben(S) (n)kwidą́s, Ch na·soxtoă, GV neitya·ⁿtos.

2.1. Ar -xt- for Ar -t-: **5.** Ar hɛni·sixtⁱ *one* (animate), on the following analogy within Ar: hɛni·sei *two* (inan.) : hɛni·siθi *two* (an.) = hɛni·setⁱ *one* (inan.) : X.

3. Ar -ʔ-, PCA -k-: **6.** Ar θiʔᵃ *nine*, F

[1] This article was originally written in Mexico in the Autumn of 1939, and sent to Boas for IJAL. It was recovered from the Boas collection by Voegelin: See Ms 283 in Index to the Franz Boas Collection of Materials for American Linguistics, Language Monograph No. 22 (Supplement to Lg. 21 [1945]); and sent to me, by my request, for minor revisions before publication. Both in Mexico and here I have had to edit without access to some of the desirable reference material; Algonkianists will recognize the forms cited even in case of minor slips in transcription.

[2] Lg. 1.130–56 (1924).

[3] Proof of this is given in my paper The Position of Potawatomi in Central Algonkian, Papers of the Michigan Academy of Science, Arts, and Letters, 28.537-42 (1942; published 1943).

[4] Despite the discussion by Voegelin in Proto-Algonkian Clusters in Delaware, Lg. 17.143–7 (1941). I hope to present a more detailed discussion of this point shortly.

[5] Asterisks have been omitted in the citation of single phonemes or clusters from PCA. The limitation "PCA" suffices.

šaaka (cf F -šika in nekotwaašika *six* and nešwaašika *eight*), Oj šaank, šaankaswi (šaankaso-), Ch sóoxtoă; **7.** Ar na?aⁿ *mother!;* C nika, Oj ninki.

3.1. Ar zero for Ar -?-: **8.** Ar neinaⁿ *my mother*, F nekya; **9.** Ar hi·nanⁱ *his mother*, Oj okin. Sapir reconstructs *okiwali.

4. Ar -s-, PCA -kw-: **10.** Ar -ni·si-, -ni·se- *one*, F nekoti, Rupert-House C nikwat, Aben ngued-.

5. Ar -x, PCA -kw-, see **1.**

6. Ar -s-, PCA -xkw-: **11.** Ar hisei *woman*, pl hiseinaⁿ, F ihkweewa, C iskweew, Oj ikkwee, Ch hée.

7. Ar -t-, PCA -kwet-: **12.** Ar -ni·t- *one*, PCA nekweti, F nekoti, [Mohican[6] nkwat].

8. Ar -s-, GV -θ-, PCA -š-: see **1** and **13.** Ar ni·saⁿtasaⁿ? (Sapir's writing illegible, ending may be wrong) *seventy;* GV ni·θaⁿtaθon (ditto, last letter may be u), cf Oj niišwaaswaak *seven hundred.*

8.1. Ar -x- for Ar -s- representing PCA -š-: **14.** Ar čɛⁿxaⁿ *another one*, cf Ar čɛ·seix, **1.**

9. Ar -s-, GV -θ-, PCA -?θ-: **15.** Ar neisanaⁿ *my father*, F noosa, C noohtaawiy, Oj noons, GV ni·θinaⁿ.

9.1. Ar -x- for Ar -s- representing PCA -?θ-: **16.** Ar neixaⁿ *father!*, Del núuxwa; cf **15.**

10. Ar -xwi-, GV -sö·i-, PCA -Kswi- (first member of cluster unknown): **17.** Ar ni·saⁿtaxwini *seventeen*, GV ni·θa·ⁿtosö·in; cf the final syllable of Oj ninkotwaaswi *six*, and the final syllable of the second part of the F compound for *thirteen* in **18; 18.** GV nɛ·sö·in *thirteen*, F metaaswi-neswinesiiwi; **19.** GV ni·sö·in *twelve*, F metaaswi-niišwinesiiwi.

11. Ar -xʷ, GV -s, PCA -Kswi- (first member of cluster unknown): see **4.**

12. Ar -s-, GV -θ-, -x-, PCA -xθ-: **20.** Ar nɛ·saⁿ *three*, F neswi, Oj niswi, C nistw-, Aben(S) nas·, Mic(S) si·st, GV ɛhnɛθi (inan.), ɛhni·xic (an.).

13. Ar θ-, PCA š-: see **6.**

14. Ar -s-, GV -s-, -θ-, PCA -šw-: **21.** Ar ni·sⁱ *two*, F niišwi, Oj niišw-, Aben nizw-, GV ɛhni·sic (an.), ɛhni·θe·i (inan.).

15. Ar h-, GV h-, PCA zero: see **11** and **22.** Ar hinenⁱ *man*, pl hineninaⁿ, F ineniwa, Oj inini, C iyiniw, GV hineni, Ch hetan, pl hetaneo, Bl ninan, pl ninaiki.

16. Ar b-, GV b-, PCA m-: see **2.**

17. Ar n-, GV n-, PCA n-: see **3, 10, 12, 20, 21.**

18. Ar -n-, GV -n-, PCA -n-: see **22** and **23.** Ar ya·θanⁱ *five*, F nyaananwi, Oj naanani, C niyaanan (w-), Aben(S) nalán, GV ya·tanⁱ.

19. Ar y-, GV y-, PCA ny-: see **23** and **24.** Ar yeinⁱ *four*, F nyeewi, Oj niiwin, Alg neew.

19.1. Ar n- for Ar y- representing PCA ny-: **25.** Ar yɛneiniθi (some form of *four*) by dissimilation from earlier *nye-nyeini-, through *nyeneini- (cf **24**); **26.** Ar yana·-θaniθi (some form of *five*) by dissimilation from earlier *nya-nya·θani, through *nyana·-θani- (cf **23**).

20. Ar -θ-, GV -t-, PCA -θ-: see **23.**

21. Ar -n-, GV -n-, PCA -l-: see **22.**

22. Ar -n-, GV -n-, PCA -w-: **27.** Ar hini·sanaⁿ *his father;* F oosani (reflecting earlier *howo?θa-); cf **15;** see also **8, 11, 15, 22, 24.**

23. Ar zero, PCA -wa, -wi: see the singular forms in **11, 22.**

24. Ar i, PCA i: see **11, 22, 24.**

25. Ar i, PCA e: see **10.**

26. Ar i, PCA o, w: see **23, 27,** and **28.** Ar hi·saha?aⁿ *his older brother*, Oj osayeyan;[7] **29.** Ar hɛni·siθi *two* (an.), GV ɛhni·sic, C niisw-; **30.** Ar -nɛi-, -nɛ·si-, *three*, GV ɛhni·xic, C nistw-.

27. Ar e, PCA e: see **22.**

28. Ar a, PCA a: see **4, 6, 15, 23, 28.**

29. Ar i·, PCA ii: see **21.**

30. Ar i·, PCA e: see **10, 12.** Sapir explains as follows: the change from *e to i· in -ni·t- *one* is perhaps conditioned by the special consonantal shift, *-kwet- to -t-; *nekwe- develops through *nekwi-, *nikwi-,

[6] Swadesh, Mohican Lexical Material (unpublished manuscript, 1939).

[7] This form is certainly in error; Oj e occurs only doubled.

*nisi-, and to -ni·si-, with lengthened vowel on the analogy of -ni·t-.

31. Ar i·, PCA o (before certain clusters): see **28.**

32. Ar i·, PCA oo (before certain clusters): see **27.**

33. Ar ei, PCA ee: see **11, 24.**

34. Ar ei, PCA i(?): see **1.**

35. Ar ei, PCA oo: see **15.**

36. Ar ɛ·, PCA e: **31.** Ar nɛ·sɛhɛʔɛ *my older brother*, Oj nisayi (Oj i reflecting older e), Del(S) nxant*θ*.

37. Ar ɛ·, PCA ee: see **1.**

38. Ar a·, PCA aa: see **23.**

39. Ar a^n, PCA aa: see **15** and **16,** with which cf also C ohtaawi */father/*.

To the above material Sapir adds fourteen Primitive Algonkian reconstructions, with forms and possible forms from all the languages on which there were, at the time of his writing, any data, reliable or not. Most of these have been superseded by the work of Bloomfield, but three of Sapir's reconstructions deserve mention.

For *man* Sapir reconstructs *(h)ileniw, for *woman* *(h)iskwɛ·w. The initial aspiration is suggested on the basis of the Plains forms: see **11** and **22.** Bloomfield's PCA assumes no phonemic contrast, at least, between initial vowel and initial aspiration plus vowel; no such contrast is called for to explain the observed phenomena of the central Algonkian languages. But Sapir's suggestion for an earlier stage, based on the Plains languages, finds support in eastern Algonkian too. Del hák·i, *land*, beginning with an aspiration, is cognate to PCA *ahkyi or *axkyi; Del (?)alánkw *star*, with initial vowel or glottal stop (depending on a point of phonemic analysis not yet definite), is cognate to PCA *a*θ*aankwa. In both the eastern and the plains cases, of course, various secondary developments, rather than a contrast in the parent language, may be the true explanation.

For *one* Sapir reconstructs both *nekwet- and *nek^{w}t-, the latter because of the correspondence Ar -t-, PCA -kwet-. Such a contrast of forms based on vowel syncope is the sort of thing which leads one to look for an accentual system. The accent of Delaware, the pitch accent of Micmac, Passamaquoddy, and Penobscot, and certain pitch phenomena that the present writer thought he heard in Arapaho, all suggest the possibility that early Algonkian had more complex prosodemic structure than is maintained by any of the modern central dialects.

More conclusive statements on both these points must await further detailed study of the eastern and plains languages.

REVIEWS

A BIBLIOGRAPHICAL CHECK LIST OF NORTH AND MIDDLE AMERICAN INDIAN LINGUISTICS IN THE EDWARD E. AYER COLLECTION. Vol. 1, A-M; Vol. 2, N-Z. [pages not numbered: about 500 pp. altogether]. The Newberry Library, Chicago, 1941.

The Foreword to these volumes, by Ruth Lapham Butler, tells us that the present collection of manuscripts, published papers and monographs in the Ayer Collection was begun with the 1903 purchase of the Pilling Collection; that systematic additions were made to this including the 'scientific linguistic literature which ethnologists have produced during the last three decades'; that the manuscripts in the Ayer Collection listed in a previous publication (1937) are again listed in the present volumes, together with bibliography of published works; that the preparation of this bibliography was virtually supervised by Manuel J. Andrade. The volumes are printed in off-set on heavy paper, cloth bound, with the contents luxuriously spaced: if one or two items are listed under a language name, as is often the case, the remainder of the right page is left blank, and the following left page is also unusued because language names (center heads) are placed on right pages only. It looks pretty and is obviously done with care. (One slip not caught is the spelling of Bungel for Bunzel in the terminal index of authors, translators and editors,—although in the main section under Zuni the author's name is correctly given as Bunzel; another slip is the inclusion of Li's paper on Chipeweyan stems [Athabascan] under the center head Chippewa [Algonquian]).

Over 300 languages are listed, and, quite aside from the manuscripts which are available in the Newberry Library, the volumes serve as an introductory bibliography of works published on Indian languages in Canada, U. S., Mexico, and Central America up to 1941, unencumbered by references to general books or short papers in which these languages are mentioned incidentally. But there are duplications; thus, under one center head for language (Aguacateca), two of Stoll's works are listed; these are listed again under another center head for language (Ixil), together with a couple of manuscripts by other authors.

We reproduce here the alphabetic list of language names for which bibliography is provided, followed by a parenthetic number to show how many items the Ayer Collection has for each language.

Abnaki (21), Achumawi (8), Aguacateca (2), Aht (2), Ahtena (1), Akwa'ala (1), Alaguilac (3), Aleut (15), Algonkin (61), Alsea (2), Amuzgo (1), Apache (13), Apalachi (2), Arapahoe (11), Arikara (3), Assiniboin (9), Atakapa (4), Athabascan (26), Atsina (2).

Beaver (11), Bella Bella (4), Bella Coola (4), Beothuk (4), Biloxi (2), Blackfoot (31).

Cabecar (4), Caddo (6), Cahita (5), Cahuilla (3), Cakchiquel (37), Carib (23), Carrier (11), Catawba (6), Cayuga (3), Chaneabal (7), Chasta Costa (2), Chatino (1), Chehalis (5), Chemakum (2), Cherokee (71), Cheyenne (20), Chiapanec (11), Chichimeca (4), Chilanga (1), Chilula (1), Chimariko (3), Chinantec (7), Chinook (67), Chippewa (158), Chitimachan (2), Chocho (5), Choctaw (60), Chol (5), Chontal (Oaxaca) (3), Chontal (Tabasco) (4), Chorotega (2), Chorti (3), Chugamutes (1), Chukchee (2), Chumash (2), Chumeto (1), Clallam (1), Clatsop (1), Coahuiltecan (1), Coca (1), Cochiti (1), Coeur D'Alene (2), Comanche (7), Coos (2), Cora (8), Costanoan (2), Cree (123), Crow (4), Cuicateco (1), Cuitlateco (1), Cuna (3).

Dakota (164), Delaware (35), Dene (8),

Dhegiha (9), Dhudhuroa (1), Diegueno (3), Dog Rib (1).

Eskimo (150), Esselen (1), Etcharreotine (21), Eudeve (4), Eyak (1).

Flathead (3), Fox (10).

Gabrileno (2), Gros Ventre (1), Guachama (1), Guatuso (3), Guaymi (6).

Haida (18), Ha-Ilt'-Zukh (1), Hidatsa (4), Hokan (2), Hopi (11), Huastec (16), Huave (4), Huichol (1), Hupa (5), Huron (11).

Illinois (2), Innuit (2), Iowa (5), Iroquois (15), Isleta (4), Ixil (4).

Jacalteca (3), Jicaques (2).

Kadiak (1), Kaiyuhkhotana (1), Kalapuyan (1), Kalispel (12), Kamchadal (1), Kaniag'mut (1), Karankawa (1), Karok (6), Kathlamet (2), Kato (2), Kawchodinne (1), Kekchi (12), Keresan (6), Kiche (74), Kickapoo (1), Kinai (2), Kiowa (8), Kitksan (1), Kizh (1), Klamath (3), Klickitat (2), Kolushan (6), Kolyma (1), Konkau (1), Koryak (2), Kutchin (1), Kutenai (21), Kwakiutl (28).

Laguna (10), Luiseno (3).

Mahican (2), Maidu (5), Makah (1), Maliseet (6), Mam (14), Mandan (10), Mangue (2), Maskogian (1), Massachusetts (25), Matlazingo (6), Maya (General) (40), Mazahua (4), Mazateca (7), Menominee (11), Miami (2), Micmac (41), Missisauga (3), Miwok (2), Mixe (13), Mixtec (15), Modoc (3), Mohave (2), Mohawk (75), Mohegan (12), Montagnais (17), Mopan (1), Moquelumnan (2), Mosquito (18), Muskoki (59), Mutsun (5).

Naas (1), Na-Dene (1), Nahuatl (242), Nanticoke (1), Narragansett (8), Naskapi (1), Natchez (4), Natick (5), Navaho (27), Nez Perce (16), Nipissing (33), Niska (1), Nisqualli (2), Nootka (12), Ntlakyapamuk (Thompson) (10).

Ofo (1), Okanagan (1), Omaha (17), Oneida (5), Onondaga (11), Opata (4), Osage (8), Otoe (4), Otomi (41), Ottawa (12).

Paiute (9), Pakawan (1), Pame (2), Pamlico (1), Pamunkey (1), Papabuco (1), Papago (4), Passamaquoddy (11), Pawnee (11), Paya (2), Peau De Lievre (1), Penobscot (8), Penutian (1), Pequot (4), Picuris (1), Piegan (1), Pima (8), Piro (2), Poconchi (26), Pokoman (6), Polyglot (29), Pomo (6), Ponka (5), Popolaca (7), Potawatomi (7), Powhatan (2), Pueblo (8).

Quileute (3), Quinault (1), Quinnipiac (1).

Rama (2).

Sac and Fox (2), Sahaptin (3), Salinan (5), Salish (22), Sanpoli (Nespelem) (1), Santa Barbara (2), Sarcee (6), Seminole (5), Seneca (33), Seri (Kunkaak) (3), Shasta (3), Shawnee (12), Shoshone (12), Shuswap (6), Sia (1), Siletz (1), Siuslawan (1), Snohomish (1), Spokan (1), Squamish (1), Stalo (Lower Fraser) (1), Stikine (1), Subtiaba (3), Sumu (Ulva) (2).

Taensa (10), Tagish (1), Taguaska (1), Tahltan (1), Takelma (4), Tanana (1), Tanoan (2), Tapachuelta (4), Tapahanek (1), Tarahumara (4), Tarascan (42), Tawasa (1), Ten'a (5), Tepeguana (5), Tepehua (2), Tequistlatean (1), Terraba (Tirribi) (4), Tete de Boule (1), Tewa (4), Tillemook (2), Timucua (7), Timuquana (2), Tiwa (1), Tlappanecan (1), Tlascalteca (1), Tlingit (14), Tlo-Ho-Tah'hoi (2), Tojabales (1), Tona'xa (1), Tonkawa (2), Toquart (1), Totonac (8), Trike (1), Tsimshian (25), Tubatulabal (3), Tukudh (17), Tunica (2), Tuscarora (6), Tutelo (3), Twana (1), Tzeltal (18), Tzotzil (11), Tzutuhil (2).

Uluaska (1), Umpqua (1), Ute (4), Uto-Azteken (6).

Wacco (1), Wailaki (1), Wakashan (1), Wappo (3), Washo (4), Wawenock (1), Wea (1), Winnebago (10), Wintun (3), Wishosk (1), Wishram (3), Wiyot (2), Woolwa (2), Wyandot (3).

Xinca (4).

Yakama (2), Yak'utat (1), Yana (4), Yaqui (4), Yocotan (3), Yokut (4), Yucatec (Maya of Yucatan) (116), Yuki (5), Yuman (16), Yurok (7).

Zapaluta (1), Zapotec (35), Zoque (7), Zuni (17).

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A PROGRAM OF DESIRABLE SCIENTIFIC INVESTIGATIONS IN ARCTIC NORTH AMERICA. Compiled and Published by The Arctic Institute of North America. Bulletin No. 1. Montreal, Canada, 1946. Pp. 65.

AN AUTHOR, TITLE, AND SUBJECT CHECK LIST OF SMITHSONIAN INSTITUTION PUBLICATIONS RELATING TO ANTHROPOLOGY. By Mamie Tanquist Miller. The University of New Mexico Bulletin 405.1–218. Bibliographical Series, Volume I, No. 2. Albuquerque, N. M., 1946.

SIXTY-FIRST ANNUAL REPORT OF THE BUREAU OF AMERICAN ETHNOLOGY TO THE SECRETARY OF THE SMITHSONIAN INSTITUTION. 1943–1944. By M. W. Stirling. Washington, D. C., 1946. Pp. 8.

OS ESTUDOS LINGÜÍSTICOS NOS ESTADOS UNIDOS DA AMÉRICA DO NORTE. Joaquim Mattoso Camara Jr. Rio de Janeiro, Brasil, 1945. Pp. 18.

LA LINGÜÍSTICA Y EL CONOCIMIENTO DE LOS INDIOS MONOLINGÜES. By Manuel Gamio. Boletin Indigenista 5.294–301 (1945). [With English translation.]

AREAL AND TEMPORAL ASPECTS OF ABORIGINAL SOUTH AMERICAN CULTURE. By John M. Cooper. From The Smithsonian Report For 1943, pp. 429–62. Publication 3757. Smithsonian Institution, Washington, D. C., 1944.

CAINGANGNAMEN IN DER GEOGRAPHIE. By Efes. Pindorama. Zeitschrift zur Förderung der Brasilkunde 1.7–14 (1937), San Paulo, Brasil.

CANTOS QUECHUAS DE ANCASH. By J. M. B. Farfan. Revista del Museo Nacional 13.1–10 (1944). Lima, Peru, 1945.

The Arctic Institute's Bulletin states what needs to be done in various fields of research in the areas of the North American Arctic—in subjects ranging from agriculture to oceanography, including the various branches of anthropology. The summary of problems in anthropology is contributed by Henry B. Collins, Jr. Collins divides the entire area into seven major regions. He mentions the existence of linguistic material or, what is far more often the case, its lack, in each region, and sometimes calls attention to special problems, such as the need for investigating the Chugach dialect from the point of view of borrowing from Tlingit and Ahtena. There are no linguistic studies at all in many of the regions (for example, the Alaska Peninsula); or, data on language are quite meager (for example, regarding the dialect of the Siberian Eskimo); or again, there are but a few studies, of the type represented by Diamond Jenness' Comparative Vocabulary of the Western Eskimo Dialects (Rep. Canadian Arctic Exped., 1913–18, vol. 15, pt. A., 1928), dealing with the dialects of the Diomede Island, Cape Prince of Wales, and Arctic Coast peoples.

Miller's check list contains an author, a title, and a subject index, the last being organized into nearly one hundred topics. One of these is 'Language' (pp. 197–9), which contains twenty items. This may be contrasted with 'Physical Anthropology' (pp. 203–6), which contains over twice as many items, and with 'Archeology' (pp. 147–72), which contains over twenty times as many. Of the twenty linguistic items, four deal with general linguistics and include a report by Sapir and an earlier one by Whitney. Five others deal with languages that are not American Indian, namely Coptic, Korean, Canaanite, Malaysian [*sic*] and Yoruba respectively. The remaining eleven deal with American Indian languages, three of them with Siouan, the rest with Algonquian, Aztec, Caddoan, and Carib; one is devoted to the phonetic transcription of Indian languages; and the contents of the remaining items cannot be determined from their titles. The earliest item dates from 1852 and the latest from 1936. It should be noted that Miller's list does not contain references to the publications of the BAE.

Stirling's report includes only a brief discussion of linguistic research in the BAE, namely, of Harrington's work.

Camara gave evidence of his acquaintance with the contemporary linguistic scene in his book, Princípios de Lingüística Geral, which appeared in 1942, and which he had written to serve as a basis for the advanced study of the Portuguese language. In the present pamphlet he summarizes his impressions of modern linguistic activities in the United States, in all its phases, among them what he calls 'a etnologia lingüística,' by which he means the Boas tradition. He devotes a special section to Sapir, and mentions the work of several of his students in the American Indian field. In other sections he deals with the influence of Whitney.

Manuel Gamio is the Director of the Inter-American Indian Institute. He states that there are over one million monolingual natives among the Indians of Mexico, a figure exceeded in other countries to the south. He discusses their special characteristics and calls attention to their social isolation. He refers to attempts which have been made to "rehabilitate" these groups, mostly ending in failure: the official administrative bodies lacked scientific knowledge; the scientists' work was impractical. *Sine qua non* of solving the dilemma consists of the ability of all specialists to learn the language of the monolingual group they intend to study. The use of interpreters Gamio calls both inefficient and potentially misleading. He concludes with several positive suggestions, among them that every university should have a chair of linguistics, and that government officials in charge of monolingual groups should be able to speak their language.

With a view to reconstructing the outlines of aboriginal South American cultural evolution, Cooper arranges his material under headings including physical environment, somatology, linguistic stocks, and culture (regarded in areal distribution as well as from the standpoint of diffusion and temporal sequence). The discussion of the languages occupies somewhat more than one page. It bases itself largely on Rivet (1924), but also on other, more recent sources, which appear in the bibliography. According to the latest evidence, "there are more linguistic stocks, by probably a good 50 percent, in South America than in North and Middle America combined." There are 77 stocks postulated, and over a dozen of these are spoken in an area covering four-fifths of the continent; they are, Chibcha, Quechua, Aymara, Araucanian; Arawak, Carib, Tupi, Tucano, Pano; Gê, Guaycurú, Charrua, Puelche, and Tshon. In contrast, the remaining stocks are scattered at random, but in the main marginally, over the rest of the continent. Cooper regards the distribution of these languages as "evidence of very wide migrations and drifts."

The study of Kaingang geographic names in Brasil includes a list of some fifty items. It gives several references to linguistic works relating to this language, but these do not include Jules Henry's paper in IJAL 8.172–218. The author concludes with some remarks on the meaning in Kaingang of several names on his list.

Farfan reproduces fifteen Kechuan songs in text, with poetic translations in Spanish running side by side. Some of them appear to have simple rime schemes (one called Tinyachishun consists of four lines, each of seven syllables, rimed aaaa), but others are far more complex (the one entitled Yawar Pukute consists of ten lines, with either nine or ten syllables, and rimed aabbacca dd). According to the author, many of these songs are veritable fragments of 'cantos ceremoniales'.

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Aáni 13
Abnaki
Achum
Achum
Acoma
Aguaca
Aht 24
Ahtena
Akokis
Akwa'a
Alaguil
Aleut 1
Algonq
70, 1
Alsea 1
Amuzg
Apache
Apalac
Arapah
Arauca
Arawak
Arikara
Assinib
Assinib
Atakap
Athaba
246.
Atsina
Atsuge
Atwá·n
Aymara
Aztec 4
Aẓúmm
Beaver
Bella B
Bella C

[1] This
Paleosib
pages in
by f. ind
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pages of
language
review,
with f.

LANGUAGE INDEX TO VOLUME 12[1]

Aáni 134.
Abnaki (= Abenaki) 246, 243f.
Achumawi (= Achomawi) 96f., 246.
Achumawi-Atsugewi 181.
Acoma 181.
Aguacateca 246.
Aht 246.
Ahtena 246, 248.
Akokisa 115.
Akwa'ala 246.
Alaguilac 246.
Aleut 181, 246.
Algonquian (= Algonkin, Algonquin) 49, 70, 111, 112, 133, 198f., 243f., 246, 248.
Alsea 181, 246.
Amuzgo 181, 246.
Apache 1f., 51f., 181, 246.
Apalachi 246.
Arapaho (= Arapahoe) 134, 181, 243f., 246.
Araucanian 249.
Arawak 249.
Arikara 246.
Assiniboin 246.
Assiniboine-Dakota 181.
Atakapa 113f., 246.
Athabascan (= Athapascan) 49, 51, 111, 246.
Atsina 246.
Atsugewi 96f.
Atwá·mẓiní 99f.
Aymará 111f., 249.
Aztec 49, 248.
Aẓúmmá·wi 99f.
Beaver 246.
Bella Bella 181, 246.
Bella Coola 181, 246.
Beothuk 246.
Biloxi 181, 182, 246.
Blackfoot 243f., 246.
Cabecar 246.
Caddoan 246, 248.
Cahita 246.
Cahuilla 246.
Cakchiquel 83, 246.
Carib 182, 213f., 246, 248, 249.
Carrier 181, 246.
Catawba 64f., 181, 246.
Catloltq 181.
Caxinauá 178f.
Cayuga 112, 246.
Cayuse 181.
Chaneabal 246.
Charrua 249.
Chasta Costa 246.
Chatino 181, 246.
Chehalis 181, 246.
Chemakum 181, 246.
Cherokee 14f., 112, 181, 246.
Cheyenne 243f., 246.
Chiapanec 246.
Chiapas 181.
Chibcha (= Chibchal Muysca) 185f., 249.
Chichimeco 181, 246.
Chilanga 246.
Chilula 246.
Chimariko 246.
Chinanteco 49, 181, 246.
Chinchaisuyo (= pukllay taki) 183.
Chinook 181, 246.
Chinook Jargon 181.
Chiquito 182.
Chiricahua 2f., 52f., 181.
Chitimacha 113f., 246.
Chocho 181, 246.
Choctaw 246.
Chokó 48f.
Chol 83, 246.
Chontal 48f., 83, 181, 246.
Chorotega 246.
Chorti 246.

[1] This index lists only American Indian and Paleosiberian languages. The numbers refer to pages in Volume 12 of IJAL. Numbers followed by f. indicate that the language is mentioned not only on the page given, but also in the following pages of the same article or review; so also, if the language forms the main topic of the article or review, it is indexed by title page reference, with f.

Chugach 248.
Chugamutes 246.
Chukchee 246.
Chumash 246.
Chumeto 246.
Clakamas 181.
Clallam 246.
Clatsop 181, 246.
Coahuiltecan 246.
Coca 246.
Cochiti 181, 246.
Coeur d'Alene 181, 246.
Comanche 246.
Comox 181.
Conestoga 112.
Coos 181, 246.
Cora 183, 246.
Costanoan 246.
Cree 133, 181, 243f., 246.
Crow 181, 246.
Cuicateco 139f., 181, 246.
Cuitlateco 246.
Cuna 185f., 246.
Dakota 181, 182, 188, 246.
Delaware 111, 243f., 246.
Dene 246.
Dhegiha 247.
Dhudhuroa 247.
Diegueno 247.
Dog Rib 247.
Eskimo 111, 118, 134, 182, 247, 248.
Esselen 247.
Etcharreotine 247.
Erie 112.
Eudeve 247.
Eyak 247.
Flathead 247.
Fox 66f., 133, 198f., 243, 247.
Gabrileno 247.
Gê 249.
Gitamat 181.
Goahibo 48f.
Gros Ventre 133f., 243f., 247.
Guachama 247.
Guatuso 247.
Guaycurú 249.
Guaymi 247.
Gúmbatwas 97.
Haida 181, 247.
Ha-Ilt'-Zukh 247.
Hámmá?wí 99f.
Hidatsa 136f., 247.
Hokan 247.
Hopi 89f., 181, 230, 247.
Huave 181, 247.
Huaxteco (= Huasteco, Huastec) 49, 83, 247.
Huichol 247.
Hupa 247.
Huron 112, 247.
Illinois 247.
Ilmá·wi 99f.
Innuit 247.
Iowa (= Ioway) 181, 247.
Iroquois 110f., 133, 192, 247.
Isleta 181, 247.
Ixil 247.
Jacalteca 247.
Jicaques 247.
Jicarilla 2f., 52f., 181.
Kadiak 247.
Kaingang 181, 249.
Kaiyuhkhotana 247.
Kalapuya 173f., 178, 181, 247.
Kalispel 181, 247.
Kamchadal 247.
Kaniag'mut 247.
Karankawa 247.
Karok (= Karuk) 181, 247.
Kathlamet 181, 247.
Kato 247.
Kawchodinne 247.
Kechua (= Quechua, Quichua, Kiche) 83, 111f., 181, 183f., 188, 249f.
Kekchi 247.
Keresan (= Keres, Kera, Queres) 181, 229f., 247.
Kickapoo 247.
Kinai 247.
Kiowa 181, 237f., 247.
Kiowa-Apache 2f., 52f.
Kitksan 247.
Kizh 247.
Klamath 96f., 247.
Klickitat 247.

Koasati 133, 134, 182.
Kolushan 247.
Kolyma 247.
Konkau 247.
Koryak 247.
Koskimo 181.
Kstsisniuc 181.
Kutchin 247.
Kutenai 181, 247.
Kwakiutl 181, 247.
Laguna 181, 247.
Lenape 111.
Lenca 181.
Link River Klamath 97.
Lipan 2f., 52f., 181.
Lower Frazer 181.
Luiseno 247.
Lutuami 96.
Mahican 247.
Maidu 181, 247.
Makah 247.
Maliseet 247.
Mam 83, 247.
Mame 49.
Mandan 181, 247.
Mangue 247.
Maskogian 247.
Massachusetts 247.
Masset 181.
Mataco 192.
Matlazingo 247.
Mattole 51.
Maya 48f., 82f., 183f., 247.
Mazahua 49, 247.
Mazateco 49, 181, 247.
Meherrin 112.
Menomini (= Menominee) 243, 247.
Mescalero 2f., 52f.
Metaco 134.
Miami 247.
Micmac 243f., 245, 247.
Missisauga 247.
Miwok 247.
Mixe 49, 188, 219f., 247.
Mixteco 22f., 49, 87, 139, 181, 184, 247.
Modoc 96f., 247.
Mohave 247.
Mohawk 112, 247.
Mohican (= Mohegan) 244, 247.
Molala 181.
Montagnais 247.
Mopan 247.
Moquelumnan 247.
Mosquito 247.
Munsee-Mahican 110f.
Muskoki 247.
Mutsun 247.
Naas 247.
Na-Dene 247.
Nahuatl 181, 183f., 187f., 217f., 247.
Nambikuara 181f.
Nanaimo 181.
Nanticoke 247.
Narragansett 247.
Naskapi 247.
Nass 181.
Natchez 247.
Natick 247.
Navaho 1f., 44, 51f., 89, 181f., 230, 247.
Nehelim 181.
Nez Perce 181, 247.
Niakyapamux 181.
Nipissing 247.
Nisga (= Niska) 181, 247.
Nisqualli 247.
Nootka 181, 247.
Nottoway 112.
Ntlakyapamuk (Thompson) 247.
Ofo 181, 247.
Ojibwa (= Chippewa, Otchipwe) 66, 133, 198f., 243f., 246.
Okanagon (= Okanagan) 181, 247.
Omaha 181, 247.
Oneida 112, 247.
Onondaga 112, 247.
Opata 247.
Opelousas 127.
Osage 181, 247.
Otoe 247.
Otomí 49, 181, 247.
Ottawa 247.
Paiute 247.
Pakawan 247.
Palaihnihan 101.
Pame 247.
Pamlico 247.

Pamunkey 247.
Pano 249.
Papabuco 247.
Papago 44f., 180, 247.
Papago-Pima 181.
Passamaquoddy 247.
Patwin 181.
Pawnee 109, 181, 247.
Paya 247.
Peau de Lievre 247.
Penobscot 247.
Penutian 247.
Pequot 247.
Picuris 247.
Piegan 247.
Pima 181, 247.
Pipil 187.
Piro 247.
Poconchi 247.
Pokoman 247.
Pomo 181, 247.
Ponka 247.
Popoloca 49, 247.
Potawatomi 243, 247.
Powhatan 247.
Pueblo 247.
Puelche 249.
Puntlatsh 181.
Puyallup 181.
Quekchí 83.
Quileute 181, 247.
Quinault 181, 247.
Quinnipiac 247.
Rama 197, 247.
Sac 247.
Sahaptin 181, 247.
Salinan 247.
Salish 49, 111, 181, 247.
San Carlos 2f., 51f.
San Felipe 181.
Sanpoli (Nespelem) 247.
Santa Ana 181.
Santa Barbara 247.
Santo Domigo 181.
Sarcee 247.
Seminole 247.
Seneca 112, 247.
Seri (Kunkaak) 247.
Shasta 181, 247.
Shawnee 243, 247.
Shoshone 247.
Shuswap 247.
Sia 247.
Siletz 181, 247.
Siouan 49, 64, 111, 136, 137, 181, 248.
Sisiaatl 181.
Siuslawan 247.
Snohomish 247.
Songish 181.
Spokane 181, 247.
Squamish 181, 247.
Stalo (Lower Fraser) 247.
Stikine 247.
Subtiaba 247.
Sumu (Ulva) 247.
Taensa 247.
Tagish 247.
Taguaska 247.
Tahltan 247.
Takelma 247.
Tanana 247.
Tanoan 229, 247.
Taos 181.
Tapachuelta 247.
Tapahanek 247.
Tarahumara 49, 247.
Tarasco 49, 111f., 183, 247.
Tawasa 247.
Tehuelche 181.
Ten'a 247.
Tepeguana 247.
Tepehua 34, 247.
Tequistlatean 247.
Terena 60f.
Terraba (= Tirribi) 247.
Tete de Boule 247.
Teton 133, 181.
Tewa 89, 229, 247.
Thompson 181.
Tillamook 181, 247.
Timucua 247.
Timuquana 247.
Tionontati 112.
Tiwa 229, 247.
Tlappanecan 247.

Tlascalteca 247.
Tlatsop 181.
Tlingit 181, 247, 248.
Tlo-Ho-Tah'hoi 247.
Tojabales 247.
Tojolobal 83.
Tonaxa 181, 247.
Tonkawa 247.
Toquart 247.
Totonaco 34f., 49, 247.
Towa 229.
Trike (= Trique) 181, 247.
Tsetsaut 181.
Tshon 249.
Tsimshian 181, 247.
Tübatulabal 181, 247.
Tucano 249.
Tukudh 247.
Tunica 113, 181, 247.
Tupi 182, 249.
Tupí-Guaraní 45f.
Tuscarora 112, 247.
Tutelo 247.
Twana 247.
Tzeltal (= Tseltal) 49, 83, 247.
Tzotzil (= Tsotsil) 49, 83, 247.
Tzutuhil 247.
Uluaska 247.
Umpqua 247.
Ute 247.
Uto-Aztecan 49, 247.
Wacco 247.
Wailaki 247.
Wailetpu 181.
Wakashan 247.
Wappo 247.
Wasco 181.
Washo 247.
Wawenock 247.
Wea 247.
Willapa 181.
Winnebago 181, 247.
Wintu·' 79f., 247.
Wishosk 247.
Wishram 181, 187, 247.
Witoto 48f.
Wiyot 247.
Woolwa 247.
Wyandot 247.
Xinca 247.
Yakama 247.
Yakonan 181.
Yak'utat 247.
Yana 182, 247.
Yaqui 247.
Yaqui-Mayo 49.
Yocotan 247.
Yokuts 133, 247.
Yucatec 247.
Yuchi 181, 182.
Yuki 181, 247.
Yuma 25f., 147f., 204f., 247.
Yurok 181, 247.
Zapaluta 247.
Zaparo (= Gae) 48f.
Zapotec 49, 152f., 181, 183, 247.
Zoque 49, 92f., 217f., 247.
Zuni 134, 181, 182, 229, 247.